AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—Washington.

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Suggestions and Notes for the Month.

In England, where the influence of the surrounding sea water modifies the temperature of the atmosphere, plowing and even sowing of seed are frequently begun as early as February. Here, except at the far South, all field operations are suspended, though the continuance of such warm weather as has prevailed throughout the first half of the Winter season proper, would admit of plowing the lighter sandy soils, or all such as will not pack and bake if worked in a wet condition. Other field work, gathering stones and roots, draining, fence building, etc., could also be carried on with facility. But we can scarcely look for such weather in February. Maple sugar making, and cutting and hauling fuel, timber, and fencing materials, are the chief out-door employments, aside from the care of domestic animals, and the important work of increasing the manure heap as much as possible. This is *the* season for "manuring with brains," as our friend Tim Bunker would term it. Western farmers tell us they do not need so many chapters on farm manure; that they are about as much troubled to get rid of the stuff, as Eastern farmers are to procure it. But Tim Bunker's manure will certainly pay, even on their rich virgin soils. We can not too often enforce the fact, that "it is the mind that makes the man." It needs no argument to prove that of two farmers having equal health, equal physical strength, and placed in similar circumstances, the one having the most brains, the one who thinks most, and *plans* best, will achieve the greatest success, with the least wear and tear of muscle. Abundant examples in proof of this are to be found everywhere. We would impress upon farmers the fact that thinking and intelligence pay quite as well in soil culture, as in any other pursuit. Reading is an aid to thinking. That man is to be pitied who is so opinionated, so self-sufficient, as to say in earnest, "I want none of your book farming." What is this "book farming" but the effort to collect the opinions and experiences of a great number of men, and convey them in printed, instead of spoken words. No one can read a sentence relating what some one else thinks of a particular crop or mode of culture, or describing another's practice, without being led into a new train of thought, and in the end his own practice will be improved thereby. Then, again, how much it lightens one's labors, how many weary hours of work pass away more pleasantly, if he have new subjects of thought to occupy the mind. How long the day is, when following the harrow, or swinging the ax from sunrise to sunset, if one have not a store of ideas to draw upon. Take as a single illustration, the article on page 52 of this number of the *Agriculturist.* Will it not relieve the tediousness of "sprouting potatoes" all day, to see in each tuber a beautiful arrangement of the stem and eyes? There are ten thousand such things to be observed and learned in connection with every department of farm life—more here than in any other business pursuit, because a greater variety of objects are constantly presented to the eye. Not only the trees and plants, but even the sticks and stones speak a language to him who learns to read that language. And this passing month of February is just the time to be reading, thinking, and planning; the time to be laying in a store of thoughts to be worked over in the mind next Summer while the hands and eyes are occupied with work. It may "please the flesh" to lazily while away the stormy days and the evening hours at the store, in trashy gossip, and in story telling; but the gathering of information from books and papers treating of field and garden crops, of animals, of improved implements, of the structure of soils and of plants, of the laws of vegetable growth, etc., will not only furnish food for thought while at hard labor, but will also lead to new plans that will put money in the purse.—As usual, we place together here sundry hints which are designed, in the main, to be merely suggestive.

Work for the Farm, Household, etc.

Animals.—Have the hints thrown out last month been acted upon? They will bear looking over again. A full grown horse, or working ox, or milch cow, may remain about stationary, if already in good flesh; but with these exceptions, every animal should be improving in condition from week to week. It is a mistake to suppose that animals must make their growth and lay on fat during the Summer, and merely be a bill of expense during Winter. If a calf, steer, heifer, sheep, or hog, be not plainly increasing in weight, there is some defect in the feeding, sheltering, watering, or salting, and the defect should be looked into and remedied at once.—The colt, calf, or lamb, to be dropped in Spring, will be of greater value if the dam be well cared for now. It is well at this season to inquire whether the breeds of animals now kept, are the most profitable, and how improved blood may be introduced. If a colt from one stallion be worth $20 more at birth than one from another, will it not pay to give $10 more for the use of the former? The breeding and raising of a horse worth $150 costs no more than for one worth only $75 when grown. The same hints apply to other animals. "A word to the wise," etc.

Buildings.—For those already constructed, the directions of last month will nearly suffice. If the weather admit, painting may be done now, and during March or early in April; it is more lasting if dried and hardened during cool weather, than if applied when the sun shines brightly upon it. A coat of paint on weather beaten clapboards will add several years to their durability.—If new buildings are planned for, the sooner the lumber can be procured and set to seasoning, the better. Study convenience in the internal arrangement of dwellings. A slight change in the location of rooms and stairs may save hundreds of steps daily, for a life time. A cellar under the whole house costs only a little extra digging and two pieces of end or side walls, more than for half a cellar. A two-story house requires no more roofing and flooring, and but a little more siding up, and wall plastering, than does a story-and-a-half house.

Corn, in the crib, bin, or still in the shock needs special care; it is one of the most difficult crops to keep in good condition, owing to the moisture in the cob and chit. A large amount of that brought to this market is sold as "unsound" at considerably less than the market price for sound corn. A very little extra care in the farm storage will often add ten to thirty per cent., or more, to the market value, which is all clear profit, as the cost of handling and transportation is not increased. There should be no dampness or heating in the crib, or wherever it is kept. Narrow cribs, with free ventilation, are essential. In preparing corn for market, it is advisable to break off the tips of the ears before shelling, and feed the small and imperfect kernels. These fill in the chinks in measuring, so as not to increase the bulk materially, and do not add their feeding worth to the weight, while the plump grain kept by itself, will sell more readily and for a higher price. Let seed corn for next year be selected from the largest, soundest ears, and be kept dry.

Corn Stalks, contain much more nutriment than is generally supposed, judging from the little care used to preserve them in good order. Cattle can not be blamed for refusing them when weather beaten by exposure to rains, and injured by heating in unprotected shocks. We know of an instance where a man kept a horse and cow all through Winter, from grass to grass, mainly on the stalks from 1½ acres of well

grown corn. The stalks were cut early, dried in small shocks, and then stored under dry covering. They were cut very fine, wet, and a little ground stuff sprinkled over. Less than half a ton of hay was used during the winter—a small bite daily. The animals kept in excellent flesh and the cow yielded a good flow of milk. Even in the dry state, corn stalks contain considerable saccharine matter which is a directly nourishing food.

Draining is always important. One half of all the farms in the country would be doubled in real value for cultivation, if freed from water, which shuts out air, keeps the soil cold, and by its expansion and contraction in freezing and thawing, tears and breaks the roots of winter crops. A single deep under-drain run through a field apparently dry, will show marked good effects upon the crops growing within twenty feet on either side. Draining may be attended to this month where the ground is not frozen, and often where only a few inches of the surface is hardened. Try one drain this Winter, if no more: it will speak in stronger language than we can write.

Grass Land, whether meadow or pasture, is injured by treading of cattle, especially when partly frozen, or in the soft state following thawing out. See "Basket" item on this subject, on another page.

Hogs.—The hints given last month are important, and no additions are needed this month.

Horses.—See notes last month, and under "animals" above. Good shoeing is important. There are plenty of blacksmiths, but very few skillful horse-shoers. There should be schools of instruction on horse-shoeing. An acquaintance of ours, bought a good family horse very cheaply because she appeared to be tender-footed, and was slightly troubled with the "heaves." He took her to another blacksmith who had skill enough to change the form of the shoe on the lame foot; and instead of using long dry hay, he cut and wet all her food. For a year past she has neither limped nor wheezed, and being just the horse wanted among a family of children, she is worth $50, perhaps $100, more than when purchased. It don't pay to employ a poor horse-shoer, because he works cheaply, and because his shop happens to be hard by.

Hired Help.—Now is the time to be looking after the summer laborers. To secure a good man, better take him a month earlier. It costs no more to board and care for a good hand, than a poor one. The *cheapest* man we ever employed cost us $20 a month, he boarding at home on Sundays, while plenty of other men were to be had for $10 or $12 a month. A man that is "handy," that will set himself to work and keep himself and others at it, that will handle tools carefully and yet effectively, that will not injure the morals of your boys by profane or lewd talk, is cheaper at $25 a month, than one of the contrary sort who will stay for his "board, lodging and washing."

Manure—Bones.—The collecting should go on vigorously this month. Stop that dark stream running from the yard; there is a good ear or two of corn in every pint of it. Read again the hints last month. *Bones* required for spring manure should be put to dissolving now. Take one or more wooden hooped tight casks—old meat barrels or molasses hogsheads will do, if tight—and set under cover, or shelter with a board. Put in say 8 gallons of water, then pour in, a little at a time to avoid great heat, 2½ to 3 gallons of Sulphuric acid (oil of vitriol) which can be bought by the carboy, for 1½ to 3 or 4 cents per pound, according to the distance from the manufactory. Then put in and punch down with a stick all the bones the fluid will cover, or even more. If the bones are closely packed, the fluid will rise to the top of the cask. Leave them to soak 5 to 8 weeks, stirring them well, and punching them down every three or four days, and adding fresh bones as there is room. After a few weeks the undissolved pieces may be taken out, and the fluid be mixed with a large quantity of muck or soil to dry it off. This will be a strong fertilizer—better and cheaper than any thing to be bought in the market—if the bones and acid can be got at moderate expense. Keep a bucket of water and some weak lye or dissolved soda or potash, or thick lime water, standing near the cask, for instant use, should any of the strong acid chance to spatter upon the hands, feet or clothing.—Much valuable time will be saved in spring, if manure be hauled to distant fields now. If placed in small heaps, and covered with a few inches of muck or good surface soil, it will not be apt to fire-fang. The soil on it will shed off washing rains, and arrest escaping gases, and itself become quite a good fertilizer.

Maple Sugar.—For full directions, see article in this number, also in Vol. XXI, February No., p. 42.

Potatoes.—Those intended for seed should be kept cool in order to prevent their starting. Though those from which the sprouts have been rubbed will throw out others and grow, (see page 53,) yet there is no doubt that the first crop of sprouts will give the most vigorous plants. In some places the potatoes have rotted. If troubled in this way, procure seed from localities free from disease. Many farmers only plant one sort and that a late one. A few bushels of an early kind always meet with a ready sale, to say nothing of the luxury of having them upon the table in July. The seed can be looked after at this season.

Plowing may be done on light soils where the ground is open. A large Maryland farmer who visited us on January 15th, stated that his plows had hardly stopped up to that date. He turns over sod land, even when heavy soil and quite wet, and surface plows it in Spring when dry and warm. The sod keeps it open below, and plowing and harrowing in Spring pulverizes the surface for a seed bed. He says long experience has proved this plan to be advantageous.

Poultry.—The directions given in this department and elsewhere, last month, will be pretty certain to produce an abundance of eggs now. Eggs designed for hatching early chickens should never be chilled. As soon as laid, put them in a cool, dry place in the cellar, or elsewhere, so that they be not too warm or too cold. Handle carefully. New breeds are often introduced most cheaply by procuring eggs. We wonder why more persons do not provide and advertise eggs of the different improved breeds. Carefully packed in some soft elastic material, they can be safely sent by express or other conveyance.

Sheep.—The demand, at good prices, will continue large for wool, for mutton sheep, for spring lambs, and for growing sheep. The flock should have the best care and attention now. For sundry hints, see page 42.—Numerous complaints of dog depredations have been recently reported, even where the laws are good and strong. Stir up the public sentiment in favor of enforcing these laws. Shoot or poison every dog larger than a rat terrier that looks at your premises. The sheep already killed by dogs the present winter, are worth more than all the dogs on this continent. In view of the immense damage they have done to the sheep raising interest of our country, we heartily wish every dog could be treated as the Dutchman's dog was—had his "tail cut off short, close up behind his ears."

Tobacco.—If this is to be cultivated, the field it is to occupy, should be prepared by high manuring and deep working. A good loam, in a situation not liable to early frosts, is to be selected. Good barn-yard manure at the rate of 25 to 50 loads to the acre should be plowed in deeply. As the planting will not take place until June, the work of preparing the soil may be done at any convenient time—the manure is to be looked after now. Tobacco makes a heavy draft upon the soil, and if cultivated year after year upon the same land, will inevitably ruin it. It should only be grown as part of a rotation. The culture will not be profitable in very windy localities, as the leaves are torn by high winds, and their value much diminished. The seeds are not sown until April, at which time seasonable directions will be given for the preparation of the bed. The kinds cultivated are the Connecticut Seed Leaf, and the small leaved Cuba. The former is largely grown in the valley of the Connecticut, and elsewhere, and is especially valued for wrappers to cigars. The Cuba is used for filling cigars, making chewing tobacco, etc.

Tools.—See "Implements" last month. Now is the time to get them all in order, and to procure all new ones that will be needed next Spring. The best are the cheapest, without regard to prices. A good steel hoe, rake, plow, or other implement, will outlast several soft iron ones, and do their work better. As we have somewhere before illustrated, a man will cut as many cords of wood in a week with a first rate ax, as two men can cut with poor axes, while the cost of the two tools will barely vary 50 cents—hiring a week's extra work, to save 50 cents in the cost of an ax is not the best economy. The illustration holds good for all other implements—out-door and in-door as well.

Orchard and Nursery.

The directions for this month might all be condensed into "get ready for Spring work," as there are but few localities in which the season is far enough advanced to allow of much besides preparatory work. The hints and suggestions of last month apply mainly to this also. But a great deal of thinking and planning can be done now, to be executed at the proper time. Every little convenience prepared now, will save valuable time when the press of spring work is upon us.

Cions should be cut while there is abundant time to make a careful selection. Except when making experiments, do not graft an unknown sort merely because a neighbor says it is good In grafting over an old orchard, select kinds which are known to succeed in your own neighborhood. Some of the finest fruits in one locality, do poorly in another place. Cut cions from trees which you know to be true to name, and label them so that there can be no confusion at grafting time. Select healthy, *well ripened* wood, cut when not frozen, and preserve in earth in the cellar.

Cleanse the rough and moss covered trunks and limbs of old trees by scraping; wash with strong soap suds or weak lye.

Fruit stored in the cellar or fruit room, should be looked over, and decaying specimens removed. Carry that required for the table to a warm room to ripen off a few days before it is needed.

Grafting.—Those who go about to do grafting, generally begin very early, in order to make their season as long as possible. Grafts put in long before the growing season commences, are exposed to drying winds, and are liable to accidents. Root grafting can be performed in the house, the grafts being kept in boxes of sand in the cellar until the time for planting out.

Insects.—Destroy the eggs wherever they can be discovered. They are often found glued to the twigs. Crush those in the cocoon or chrysalis state.

Manure.—A good top-dressing placed around the trunks, as far out as the roots extend, is of more benefit to the tree, than a quantity of manure piled around the trunk. Fruit trees should not be over manured. Make good use of ashes in orchard and nursery; pear trees are much benefited by them.

Orders.—If you failed to procure nursery stock in the Fall, attend to it at once. Nurserymen generally fill those orders first which are received first, and those who send late, fare the worst. Look over the catalogues carefully, and have a full understanding as to the size and quality. Better pay a large price to a good, well-known, *honest* nurseryman, than to take as a gift, the trees of those who will fill your order any way—with *some* kind of trees, if they have not an abundance of what you want. Some of the nursery stock advertised at very low rates, is the most costly that can be bought.

Pruning.—Winter pruning is generally abandoned by good orchardists. The wounds made now are exposed to the weather, and do not heal over as readily as when it is done in early summer.

Planting should be done as early as the weather will admit. Have the ground well prepared, and don't hurry the job. Recollect that an orchard is for a life time, and extra care in planting is time and labor well invested. Stake the trees, to prevent them from being whipped about by the wind.

Stakes, labels, tallies, mats for packing, etc. See that these are ready and in abundance. Labels and tallies can be made at odd hours; have the latter strung and ready for use.

Kitchen and Fruit Garden.

Here, too, but little can be done except in preparing for the season of work. Where *forcing* is carried on, this is a busy month, but the number who grow vegetables in this way, is limited to a few professional gardeners who do not need our suggestions. The demand for early vegetables, which in England is supplied from forcing houses, is here satisfied by the products of more Southern localities, the West Indies and other Islands, and the Atlantic coast of the United States.

Cold Frames, need the same care as directed for last month—plenty of air on mild days, and protection from sudden changes of temperature.

Cuttings of gooseberries and currants may still be made: prepare them for planting, by carefully cutting out all the eyes from the portion which is to go below ground. Bury them in the cellar or open ground, if it is not frozen.

Grape Vines, should have been pruned in the Fall. Those neglected then, should be trimmed as early as possible now.

Fences.—Repair and make proof against stray animals. See that the gates have fastenings and will swing without dragging. A few nails driven in time will often prevent much trouble.

Hot-beds for the family garden had better be left till next month, except at the South. See that frames and sash are in readiness, and do all painting and glazing in season: read note for last month.

Horseradish.—Dig wherever the frost will allow. If more is taken up than can be marketed or used, cover with sand, to prevent wilting. If a new bed is needed, save the crowns for planting out.

Manure.—Have a supply of stable manure ready against the time for making hot-beds. See that fertilizers from every source are saved. Compost heaps should be turned over and well mixed. For large gardens manure may be carted to the places where it is to be used, and placed in heaps.

Pea Brush and Bean Poles should be provided in sufficient quantities to meet all anticipated demands. The old stock that has been exposed to the weather, had better be burned.

Prune currants and gooseberies, if neglected in the Fall—cut judiciously so as to leave the bush well balanced. These are too valuable to be absent from any farm or other garden.

Rhubarb.—If new plantations are needed, make preparations to operate as soon as the ground can be worked, or the plants will get the start of you. Give room enough; 4 feet each way is none too much. Give plenty of manure; there is no danger of over-feeding. Remove the earth from the crown of the old plants, and take off with a sharp spade a bud with a portion of root attached. The roots are very brittle, and should be handled with care. Get early supplies by placing a few roots in boxes of earth in the green-house, or by covering some of the plants in the bed, with a box or barrel open at both ends. Fresh stable manure is piled around this, and the heat will soon cause the plants to start. The box or barrel should only be covered when there is danger of frost. If roots are not accessible, try the seed from our free distribution.

Seeds.—Overhaul and supply deficiencies—send orders to the seedsmen early. Those who can afford it, can try, as we have done for some years, every novelty that is offered. For the guidance of those who have had no experience, a list is given on another page, of the varieties we have found to be of good quality. Better be at a little trouble to obtain seeds from reliable sources, than to buy from irresponsible peddlers, who too often carry old seed around, because they can buy it cheap. If a large stock of some favorite variety was secured from the garden last year, distribute freely to the neighbors and thus encourage raising good vegetables.

Seed Drill.—No garden of any considerable size should be without a machine for sowing seeds. Planting large patches by hand is slow and backaching work, and it is not done as well as by a proper machine. There are several contrivances for the purpose. We have used the "Wethersfield Seed Sower" for several years, with satisfaction.

Tools.—Make all needed repairs now. Get out an extra supply of hoe and rake handles, unless it is cheaper to buy them. Paint all the wooden parts which need it, and have everything in readiness. In purchasing new tools get the best, at any price. A few hours of time gained will well repay the difference in cost between a good and poor implement.

Flower Garden and Lawn.

Unless the weather is mild enough to admit of transplanting, but little work can be done in these grounds. Still they should be watched to see that any damage from winds or snow be avoided or remedied. The borders present a dreary appearance at this season. Recollect in the planting season to provide against this, especially if they are where they are visible from the house. The borders may be made to wear a cheerful look, even in Winter, by a judicious introduction of evergreen shrubbery, the foliage of which will set off the flowers in Summer, and be pleasant to look upon in Winter. The Holly-leaved Barbery, Rododendrons, Tree Box, Laurel, Daphne Cneorum, and others, according to the locality, may be used. Make all projected improvements on paper, and if the place is large, and the means warrant it, call in the services of a landscape gardener.

Cold Frames need to be properly ventilated. Give water only when absolutely necessary; remove decayed leaves. Guard against the entrance of mice, and cover from frost in cold weather.

Evergreens—See that the branches are not broken down by accumulations of snow. Large snow banks will be apt to break the lower branches as they settle; avoid this by shoveling away.

Hot-beds.—Make all necessary preparation. Where early annuals are wanted, they may be started in the latter part of this month, but it is better to wait until the next.

Labels and Stakes.—Prepare an ample supply during the stormy days.

Manures may be collected and carted out.

Protection.—Inexperienced persons are apt to remove this as soon as they think the severity of winter has passed. Many things require protection, not on account of the severe cold of our climate, but from the sudden alternations of heat and cold in Spring. If the straw or other covering has been torn off by the wind, have it replaced. A warm spell this month may induce some things to start too early. Shade these from the sun. See article on straw mats p. 49.

Shrubbery.—Have an eye to it after a heavy fall of snow. In mild weather pruning may be done. Pruning does not mean an indiscriminate cutting at a bush. Those shrubs which flower on the new wood, should be cut in a way to induce a vigorous new growth. Many flower only on the wood of the previous year, and should be only sparingly thinned when the branches are too crowded.

Transplant shrubs and deciduous trees whenever the ground is in suitable condition for working. Determine beforehand, what the effect will be, before you plant out or remove a tree or shrub.

Trellises.—Repair old and make new ones. If disposed to try your hand at ornamental work, choose simple and graceful forms rather than elaborate ones. Study what the effect will be when covered with vines.

Green-Houses.

These will require but little to be done beyond what was indicated last month. Now that warm days are likely to occur, care should be taken to air freely. The temperature should be maintained as uniform as possible, and should never get above 45°, where plants are merely kept, not growing at present. In case of a cold spell, fire heat will be needed. In giving air be careful to avoid a draft.

Bulbs which are growing, should be placed near the glass, to secure healthy growth and strong bloom.

Decayed Leaves.—These should be carefully removed, as they are not only hurtful to the plants, but detract from the neat appearance of the house.

Insects.—Keep up a constant war upon these, by fumigation with tobacco, solution of whale oil soap, and other destroying agents.

Mice.—These often cause great trouble in the green-house; they are very fond of carnations and many bulbs. Set traps or keep a cat.

Prune plants which need to be brought into shape.

Repot all plants needing it. Have plenty of earth and drainage material always in readiness.

Top-Dressing.—Loosen the surface of the soil in the pots, and where it is moss-covered, replace it with fresh earth.

Water.—Use but sparingly, increasing the quantity as the plants commence to grow.

Hot House and Conservatory.

If the weather continues as variable as it has been, extra care will be required to maintain a proper temperature. The sun's rays have now become more powerful, and as many plants have commenced a vigorous growth, great care should be taken to prevent checking this by a sudden cold.

Air should be admitted by the upper ventilators whenever the thermometer shows a temperature of 75° or 80°—currents of cold air should be avoided.

Annuals.—Those required for early planting or for growing in pots, may be sowed, such as Balsams, Rhodanthe, Nemophilas, Leptosiphons, Corbea, Maurandia, etc.

Azaleas are now in flower, and require more water and frequent syringing. Young plants should be repotted.

Bedding Plants.—A good stock of these should be propagated. Verbenas, Petunias, Pelargoniums, Ageratums, Gazanias, Lantanas, and the like, will be in large demand at the season for planting out.

Bulbs.—A constant succession of bloom should be kept up by bringing in from the reserve stock in the green house.

Camellias.—These should now be rewarding the care of the cultivator by abundance of flowers. Keep the foliage clean, but avoid wetting the petals. Look out for the red spider.

Carnations, need turning frequently to prevent them from drawing over towards the light. Give water more freely. Propagate by cuttings.

Fuschias.—These are now pushing their growth, and require an increased amount of water. Put in cuttings—especially of hardier kinds for bedding.

Insects need watching to prevent them becomidg "masters of the situation." Freedom here is only preserved by eternal vigilance.

Pelargoniums need more water now that they are growing. Cuttings may be made. If attacked by the green fly, they need fumigation.

Repotting.—This will be necessary with quick growing plants. Gloxinias, Gesnerias, and others, require plenty of pot room in order to flower well.

Verbenas intended to flower in pots, will need their final shifting.

Syringe often to maintain proper moisture in the atmosphere. Wet the walks if the air be dry.

Water, should be given according to the demands made by the foliage. Recollect that an excess is as injurious as too little. Avoid the use of water colder than the air of the house.

Grapery and Orchard-House.

In this latitude, cold graperies and orchard houses will require little attention during the present month. The temperature should be kept low, and injury from dampness guarded against. In houses where a moderate heat is employed, the vines may be put up and the inside borders watered with liquid manure. When growth commences, it should be followed up by judicious pinching in. Sprinkle occasionally, and keep the temperature at 45° or 50°. In forcing houses the vines are in all conditions of forwardness, and it is not possible to give particular monthly directions for these.

Apiary in February.

Observe the directions given last month. Sufficient ventilation should be allowed, and the air passages kept open. During the warm days, the bees will be disposed to fly, and they should be permitted to do so, except where there is newly fallen snow. Weak hives should be protected against the raids of marauders, by closing the entrance so as to allow but a single bee to pass at a time. Cleanliness should be preserved by sweeping off the floors; thus saving the bees the labor of removing the rubbish themselves. Guard against vermin as directed last month. If a new bee-house is to be built, it should be done during the fine days of the present month. This is the proper time to purchase bees; the hives are most readily brought home when there is snow upon the ground. Hives weighing from 35 to 40 pounds are to be preferred to heavier ones, provided there is a good cluster of bees. The hive should be carried upon a spring wagon or sleigh, and should be inverted. A piece of thin muslin is to be tacked over the mouth of the hive. When they are placed upon the stand, the hives should be at least 4 feet apart; six feet would be better. Weak swarms need to be fed. It is best to take the hive to a dark warm room, and place the honey where the bees will be sure to find it.

Selection of Garden Vegetables.

The following list is given to aid novices in gardening, in making a selection. Many in looking over a large seed catalogue, are apt to be confused with the great number of varieties presented to their choice, and we enumerate such as we know from experience to be good of their kind, and worthy of cultivation. Those marked with a * are on our list of seeds for free distribution:

BEANS, DWARF OR BUSH.—Early Valentine, for string or snaps; Yellow Six Weeks, do. do.; Dwarf Horticultural, for early shelling.

*POLE BEANS.—Large Lima, in warm locations; Small Lima, North of New-York.

BEETS.—Early Bassano*, fine and early; Long Blood, for main crop; Swiss Chard, fine for greens only.

CABBAGE.—Early York, small but early; Early Sugar Loaf*, large and early; Early Ox Heart, do. do.; Winningstadt, medium early, large, very hard heads; Flat Dutch*, for Winter; Red Dutch*, for pickles; Marblehead Drumhead, very large; Green Globe Savoy, small and late, the richest of cabbages.

CARROTS.—Early Horn*; Long Orange*, for main crop.

CAULIFLOWER.—Early Paris, fine; Thorburn's Nonpareil, superb; Large Asiatic, fine, late.

CELERY.—Early White Solid, for earliest; Giant White Solid, for late crops.

CORN.—Dwarf Sugar, small ears, 4 feet high; Darling's Early*, good; Stowell's Evergreen*, fine late.

CUCUMBERS.—Early Russian, small, early, and prolific; White Spined, best for table; Long Green, for pickles.

EGG PLANT.—Long Purple*, earliest; N. Y. Purple, large, but late.

ENDIVE.—Green Curled, for Summer and Fall salads.

KALE.—Green Curled Scotch*, winter and spring greens.

KOHL RABI*.

LEEK.—Large Flag, for soups.

LETTUCE.—Curled Silesian, for earliest; Neapolitan*, large and solid; Ice Drumhead, fine; Butter, superior.

MUSKMELON.—Fine Nutmeg*, see Seed List, Jan. No., p. 4; Jenny Lind, very early; Green Persian, large and good; White Japan, the best.

WATERMELON.—Mountain Sprout, productive and early; Ice Cream*, very fine; Black Spanish, fine but later.

ONION.—Large Red; White Portugal.

PARSNEPS.—Hollow Crowned*.

PEAS.—Princess, extra early and fine, 2½ feet; Daniel O'Rourke*, do. do. do.: Tom Thumb, productive, 8 to 10 inches; Bishop's Long Rod, fine dwarf, 18 inches; Champion of England*, for main crop, 5 feet; White Marrowfat, later and fine, 5 feet.

PEPPERS.—Squash for pickling; Sweet Mountain, for stuffed pickles.

POTATOES.—Ash Leaf Kidney, early, productive, and good; Early Shaw, early, productive, and good.

RADISHES.—Early Scarlet Turnip*; Long Scarlet Short Top.

SALSIFY.—Vegetable Oyster.

SPINACH.—Round Leaved*, for early; Prickly, for wintering over.

SQUASHES.—Summer Crookneck, best early; White Scalloped Bush, early and productive; Boston Marrow, Fall and early Winter; Hubbard*, fine keeping; Vow-Vow, new and fine.

TOMATOES.—Large Round Smooth, early; Fejee, or Italian*, fine and productive; Pear Shaped, for preserves, etc.; French Tree, late, stocky, curious.

TURNIPS.—Early Dutch, very early; Red Top Strapleaf*, for Spring and Fall; Yellow Swedish, or Ruta Baga, for keeping.

WINTER CHERRY.—For sauce and preserves.

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

Another Agriculturist Editor.—We are glad to be able to announce that the readers of the *American Agriculturist* will hereafter enjoy the benefit of the constant labors of Prof. Geo. Thurber, in addition to the previous editorial force. Prof. Thurber is well known as an efficient Botanist and Naturalist, engaged by the Government during the extended Boundary Survey between the United States and Mexico in 1850 to 1853; as editor of that valuable work, "American Weeds and Useful Plants;" and during three years past as Professor of Botany and Horticulture in the Michigan State Agricultural College. Some years since we solicited from Dr. Gray a series of elementary articles on plants, of a popular and useful character. His reply was, that his engagements did not admit of it, or he would gladly accede to our request, but that Mr. Thurber could execute the work better than any other one he knew of. We were then unable to secure the desired aid, but as soon as our new associate gets well into the editorial harness, we shall feel relieved of some labor at least, and our readers will doubtless be profited.—O. J.

Advertisements, "Vineland Lands."—Several subscribers write asking if they are to understand the admission of the Advertisement of the "Vineland Lands," as an endorsement from us of all that is claimed for them. We answer, No, we do not endorse this *nor any other* advertisement, unless it be specially done in an editorial notice. If we could visit every plot of ground offered for sale, and thoroughly examine the soil, the title, etc.; if we could look into every advertiser's books, and mode of doing business; if we could inspect every tree and plant and other thing advertised, then we might give a general endorsement. Our rule is: to exclude advertisements of articles or enterprises, known or supposed to be humbugs, though such usually can afford to, and do offer the *best pay*; all patent medicine nuisances; advertisements from unknown parties, unless they furnish references of their integrity; also from those who by public repute, or from our own knowledge, are suspected of dealing dishonestly with their customers. Our aim is to *try* to shield our readers from imposition and deception, even in the advertising pages as well as in the editorial columns. From the nature of the case, however, we can not always thoroughly sift all that goes into the business pages, though we believe the censorship in this department is quite as rigid as that of any other journal, not excepting the professedly religious press.—In regard to "Vineland," as stated in November, we have not found it practicable to visit or examine the locality in person but hope to do so when the growing season comes round. After considerable inquiry we found no reason for excluding the advertisement, and therefore admitted it.

The Fruit Growers' Meetings are increasing in interest. Except at the Biennial gathering of the American Pomological Society, we never before saw together so large an assemblage of real fruit talent, with so little of charlatanism, as at the meeting held at the *Agriculturist* Office on Jan. 8th. The meeting on the 16th was also well attended, notwithstanding the rain storm. A President is appointed at each meeting for the next week, who calls the assembly to order, and takes charge for the day. Specimens of fruit, etc., are brought in and tried and discussed; committees report on the best varieties for culture, and their reports are thoroughly canvassed; modes of cultivation, etc., are talked over. In short, anything pertaining to fruit growers, and kindred topics, is in order. It is not a good place to introduce and advertise any man's personal hobby, though anything of a valuable or promising character is fairly treated. The discussions are in the form of familiar conversation. We cannot find room for full reports; all said at any one meeting would fill half a number of this journal. The *results* arrived at we will endeavor to give, from time to time, with occasional more detailed reports. A brief report is given on page 51, and another one of the meeting, on Jan. 15, is crowded out from this number.

Another Monster California Pear.—Every one doubtless remembers the excitement over the great California pear produced a few years ago, in the orchard of E. L. Beard, Esq., at San Jose Mission; its weight was over three pounds. Rev. Dr. Bellows, President of the Sanitary Commission, has just received notice, via overland mail, that another pear, from the same tree, weighing an ounce more than the former one, has been forwarded to him by the steamer leaving San Francisco Dec. 20, together with other interesting horticultural products. Dr. Bellows has kindly proposed to place the pear, etc., on public exhibition at the office of the *American Agriculturist*, instructing us to receive the package from the Express Office on its arrival. We shall look for it with interest, but the steamer is already several days over-due, and we fear it may have met with some mishap—perhaps fallen a prey to the piratical "Alabama." If the box reaches us safely, the fact will be announced in the daily papers of the city. The interest Dr. Bellows has taken in the welfare of our soldiers, and the pleasant interchange of courtesies in connection with the munificent gifts of the Golden State to the Sanitary Commission, has doubtless led to the sending of these interesting horticultural products to him,

Agricultural College of Pennsylvania.—We have received the Fourth Annual Catalogue of this Institution. The Faculty consists of five professors with two assistants. Besides these there are several superintendents in charge of the farm, garden, and other departments. During the last session it has had 110 students, nine of whom graduated. Upon looking over the titles of the *theses* of the graduates, we find that they are all upon subjects relating to practical agriculture. The catalogue gives the standing of each student in the different studies, and also in manual labor. The officers of the College feel encouraged at their success thus far. The next session opens on the 18th of February. The terms are $100 in advance for board, washing and tuition for a term of ten months. Letters of inquiry should be addressed to Dr. E. Pugh, Agricultural College, Center Co., Penn.

Humbugs to be Avoided.—Just at this season, or a little later, there usually appear extensive advertisements and printed circulars without number, announcing new seeds, "Egyptian Corn," "Japanese Wheat," "Tasmanian Oats," "Tree Cotton," "Northern Coffee," etc., etc. It will be safe to let somebody else go into the speculation and make his fortune first. Last year a new Agricultural paper was started in this city, claiming great age, and offering unprecedented premiums to Postmasters and others, and a few numbers were issued. We judge, from the numerous inquiries addressed to us, that a good many did not get the premiums, did not get the papers, and cannot get any reply to letters of inquiry about their money. Some parties, not in the best repute, are buying up grape vines, refuse trees, old seeds, etc., and offering them "dog cheap," or for no money. But the varieties of humbugs are too numerous to specify. The better way is to buy what is wanted, of parties of known reliability. The new plants from the Old World will not be first heard of from an out-of-the-way, unsettled place in the far West—nor always from New-York City.

American Short-horn Herd Book, Vol. VI.—Owing to the disturbed condition of the country, the Vth Volume of this standard work was not called for so extensively as expected, and the compiler had concluded to suspend the preparation of Volume VI, for the present. He writes, however, that numerous applications to have the work go on, have been received from the more spirited Short-horn Breeders, and that if a sufficient number of pedigrees are offered, and a corresponding number of books subscribed for, to warrant the undertaking, the Sixth Volume will be issued as soon as the pedigrees can be received and compiled. We hope this will be done; it would be a pity to suspend the regular biennial issue. The temporary depression in the value of this noble race of cattle will not long continue, and the purity of their breeds, and the perpetuation of their lineage should be carefully guarded. Every Short-horn breeder is interested in keeping the blood and lineage of his herd on an indisputable record. The form and terms of application will be the same as hitherto, and we hope every one interested in the matter, will speedily communicate with the Editor of the work, Hon. Lewis F. Allen, Black Rock, Erie County, N. Y.

Mangers Dangerous to Horses.—"S. E. G.," Norwich, Conn., writes that the manger for a horse should be boarded down to the floor, to prevent the possibility of injury to the animal by getting his head underneath it. The lack of such a precaution cost him the eye of a valuable horse, and three of his neighbors had their horses' heads caught fast under the manger.

To Prevent Over-reaching.—S. Edwards Todd, in the Boston Cultivator, after having tried the plan successfully, recommends to hold up the head of over-reaching horses with a check rein. This he says throws the center of gravity of the animal further back, gives more work for the hind legs to do, hence they are not thrown forward against the heels of the front shoes.

Many Pigs.—A correspondent writes that I. J. Halsted, Douglass Co., Ill., owns a sow that brought forth 19 pigs on the 18th of December last. He asks "Who can beat it?" The same mail brings a letter from Wm. B. Lord, Kendall Co., Ill., saying that he knew a sow in Windham, Conn., which had three litters between April 4th 1848, and March 1st 1849, numbering 17, 23, and 27!—67 pigs in 11 months!!! That's the biggest record yet; to beat it, some one will have to *invent* a story.

Pumpkin Seeds Medicinal.—"J. L. R.," Jefferson Co., N. Y., inquires why Pumpkin Seeds are more injurious to cattle than sorghum, green clover, etc., which also increase the amount of urine. For the reason that the seeds contain a medicinal principle which stimulates the kidneys, thereby causing an unnatural secretion of urine from the blood. They are often used as a diuretic in domestic practice. Succulent plants, as sorghum, etc., probably cause increased flow of urine, because of the large amount of water they contain.

Poultry Wanted.—We have frequent inquiries for fowls of different breeds, from those wishing to purchase, which we are often unable to answer, for want of time or of information as to where they can be procured. Those engaged in raising them for sale should advertise.

Drills Better than Hills.—T. J. Hollingsworth, Armstrong Co., Pa., writes: Last Spring I plowed nearly 2 acres of sod, part of which was mostly sorrel. I marked out the rows about 3 feet apart. As an experiment, we planted 8 rows in drills, the grains one foot apart. We also had 8 rows on each side planted in hills 3 feet apart and 3 grains in a hill. All received the same cultivation. At husking the 8 rows planted in drills turned out 10¾ bushels of corn, the other 16 rows—8 on each side, turned out 8 and 9 bushels respectively.

Loam for Composting.—"R. G." If dried peat or muck is not at hand, use virgin loam, as dry as possible, to mix with your putrescent manures. For a worn out soil, this simple loam is worth carting a long distance. Spread this alone upon a rod square of poor pasture land in the Spring, and its effects will be visible all Summer....It is doubtful whether night-soil disinfected by sulphuric acid or sulphate of iron, etc., will produce as good and reliable a manure, as when mixed half and half with maiden earth.

Manure for Lawns.—L. D. Peters, Chatauqua Co., N. Y. The constant mowing of the grass upon lawns makes it necessary to replenish it with manure. Yet nearly all manures bring in foul weeds and coarse grasses. To meet this difficulty, some gardeners use soot, scattering it broadcast and very thinly, in the Spring. It is a powerful agent and should be used cautiously. Worms can not abide it. Charcoal dust may also be used to great advantage, and with more safety. This and ashes should be applied in the Fall, so that the snow and rain may wash down the gritty particles below the reach of the scythe.

Northern Rice.—We have had several inquiries for rice which can be grown at the north. A species which grows in India upon dry lands and upon the sides of mountains has been successfully cultivated in some parts of Europe. We do not know that it has yet been introduced into this country. It is a subject which might well receive the attention of the Department of Agriculture at Washington. The "Minnesota Rice" is a native plant which is not confined to Minnesota, but grows along the margins of rivers and in flooded localities, all over the country. It is known as "Wild Rice" (*Zizania aquatica*), is a favorite food of birds and of the northern Indians, who collect it in large quantities.

Chickory.—C. Allison, Jackson Co., O. The seeds of Chickory, or wild endives as it is sometimes called, are to be had at the seed stores. It is cultivated in deeply worked soil in rows 12 or 15 inches apart, and thinned to 8 inches in the row. The plant being a biennial, enough roots should be left in the ground to produce seed the second year. When allowed to escape from cultivation it proves a troublesome weed.

Quack Grass.—A. T. Northup, Otsego Co., N. Y. The plant known by this name, in this country, has a head somewhat like wheat, sometimes with a short beard, and at others beardless. It is sketched in Flint's Grasses and Forage Plants, which figures and describes many useful or troublesome grasses. See our book list.

Cotton from Illinois.—Rev. J. A. Bent, of Washington Co., Ill., sends as a sample of his crop, 10 lbs, of unginned cotton. He has had encouraging success, and thinks that in his latitude the cultivation will pay, when ginned cotton will bring 20 cents per lb. The staple of the sample is rather short, but an abundance of this quality would find a ready market.

Sorghum Syrup.—Very fine samples of clear, thick, honey-like syrup are on our exhibition tables, manufactured from cane grown by John Fleming, Hunterdon Co., N. J.

Diseased Pear Trees.—P. Walter, Jay Co., Ind. Your tree appears to be troubled by the leaf blight, which is not regarded as a permanent disease, but caused by some peculiarity of season. It usually occurs after a long warm rain followed by hot sunshine.

Pears—Soldat Laboreur, and Duchesse de Berri d'Ete.—"F. T. R.," Ottawa Co., Ohio. The former is considered, when well grown, one of the finest pears of its season—Oct. and Nov. The latter is ripe about the last of August; the tree is a free grower and bearer; fruit rather small but sweet and melting, but not yet sufficiently tested to be recommended for general cultivation. Both these pears are described in Downing's Fruits and Fruit Trees of America, a work which should be in the hands of every fruit grower. We can still supply it, post-paid, for $2, which is very cheap in these times of high-priced paper. for an illustrated standard book of 760 pages.

Clay for Fruit Trees.—J. J. Joslin, Rutland Co., Vt., asks: "In transplanting fruit trees into a gravelly loam with coarse gravel subsoil, will a bed of clay in the bottom of the hole be beneficial?" We judge not. It would be likely to retain too much water. If danger from drouth be apprehended, it would be better to thoroughly mix a portion of clay with the soil in which the trees are to be set, which would enable it to hold sufficient water without danger of too great accumulation. Mulching around the tree as far as the roots extend will aid in keeping a supply of moisture.

Isabella Grapes in Winter.—Next to Dr. Underhill's, perhaps no Isabella grapes are better known than those produced by E. A. McKay, of Naples, Ontario Co., N. Y. That locality and soil seem to be peculiarly adapted to this old standard native variety. On January 2d, we received from Mr. McKay's city agents (Haley & Sayre), a box of the grapes in a good state of preservation, and which would be hard to excel in flavor, and especially in the size of the clusters, and largeness of berry. They were simply laid in a thick paper box, without cotton or other packing material.

Peach on Plum Stocks.—J. Webster, Marion Co., Ill. The peach grafted on the plum succeeds much better in cold damp soils than it does on its own roots. The wild plum is successfully used and makes a very hardy stock. The peach grown on plum stocks, is somewhat dwarfed.

Curculio—A New Remedy.—A. P. Richardson, Norfolk Co., Mass., thinks that his success in preventing the attacks of the curculio is such as to warrant him in suggesting his plan to others. As soon as the trees blossom, their trunks are surrounded by cotton saturated with Kerosene oil. This is placed a foot or two from the ground, and the oil is renewed once or twice a week as long as the curculio continues to appear.

Earth Worms in an Apple Tree.—A correspondent at Franklin, N. Y., writes as follows: "Standing under an apple tree, I discovered a rotten spot in the trunk, above my head, where a limb had formerly been cut off. I commenced digging out the rotten wood with my knife, when, presently, two earth-worms fell from it. How came they there?" A bird may have inadvertently dropped one in a crevice, and the second one may be its progeny; earth containing the worms may have been thrown there. In absence of positive knowledge, one guess is about as good as another. They certainly did not originate there spontaneously.

What Grapes to Plant.—Daniel Chillas, Del., (and several other inquirers,) is informed that the subject of grapes is under consideration by the Fruit Growers' Meeting, held each Thursday at the office of the *American Agriculturist*. We shall publish a list of the varieties they fix upon, in season to be of service to those who intend to plant next Spring. For cheap graperies see *Agriculturist* for September, 1861, p. 272.

Wine from Grapes Only.—At the recent session of the Illinois State Horticultural Society, a committee, to whom was referred the consideration of the expediency and economy of making Wine from Rhubarb or Pie-Plant, recommended that the juice of the Grape alone be designated as wine, and that all liquors, the result of vegetable compounds, be known by such names as will not be likely to confound them with grape products.

Cucumber and Tomato Seeds.—S. R. Parsons, Maine. These seeds may be readily freed from the surrounding mucilage by allowing the fruit to partially decay. If placed in heaps and allowed to heat, the seeds would be injured. The best way is to place them in a box or tub and keep covered with water until sufficiently decayed to allow the seeds to be washed clean.

Vegetable Bouquet.—This must be seen to be appreciated. A finely arranged basket, from B. Stevens, Washington Market, this city, represented camellias, roses, dahlias, etc., cut from vegetables. A turnip, beet, carrot, parsnep, or onion, has one end rounded off, and with a jack-knife, petals are cut out, so natural as to deceive a person at first look. The different colored flowers are then neatly arranged in a flat turnip scooped out for a basket, and with a few green leaves, cranberries, etc., tastefully arranged, they form an interesting and attractive ornament. They soon fade, however.

Dahlias and Asters from Seed.—"E. C. P.," Caledonia Co., Vt., says that where dahlia roots can not be obtained, many have fair success with seeds. A ten cent paper furnished, in four months from planting, a number of very perfect varieties, as well as many worthless ones. The same correspondent adds that double asters, which generally produce very few seeds, may be made to seed freely by pulling out some of the center florets or petals, as they are often improperly called. This practice gives the seeds the needed room to develop.

Mignonette without Fragrance.—S. E. Warner, Fairfield Co., Conn. The trouble seems to be that you grow it on too rich a soil. Use more sand, or work in some poor earth, and the Frenchman's favorite plant will be as odoriferous as you can desire.

Arranging Hyacinths.—John D. Eastwood, Essex Co., N. J. A very satisfactory way, is to prepare a circular bed, say five feet in diameter. Set the bulbs in circles, one color to a circle, and the bulbs about three inches apart. Put the reds in the outer circle, the whites in the next, and the blues in the center. Such a bed viewed across a lawn, has a very striking effect, far superior to a mere melange of sorts and colors. The ground may be filled with annuals or bedding plants, as soon as the foliage of the hyacinth decays.

Cattle Tramping—Curious Figures.—A wild heifer belonging in the neighboring village, that ought to have been "impounded" for sundry previous misdemeanors, ran through our gate the other day, as it was opened for a carriage to pass. She galloped as if mad, up and down the garden, over the beds of bulbs, across the lawn, among the shrubbery and elsewhere. We called the owner to account for letting this animal loose for the third time contrary to law, and pointed to her deep footprints that spoiled the grass and plants wherever she stepped. He insisted that she had done little harm. The incident set us to figuring the amount of injury done in this case, and generally, when cattle or other heavy animals are allowed to run upon meadows, or fields of grain. Suppose a cow walks once around a square field of ten acres, taking five steps to a rod, and making a separate track with each foot. If the foot tramp down or spoil a surface equal to six inches square, the single journey round will injure 800 square feet. Nine cattle going three times round would spoil half an acre! Let the arithmetical reader of the *Agriculturist* carry out these figures, learn the lesson inculcated by them, and act accordingly, especially while the ground is soft, as it will often be between now and settled weather in Spring.

Too much Kindness to Sheep.—S. S. Randall, the well-known sheep breeder and author, gives, in the Country Gentleman, his views concerning the great mortality among young lambs in the Spring of 1862. In many sections, particularly of Western New-York, these animals appeared to be wanting in physical development at their birth, and thousands died in a short time thereafter. Mr Randall is of opinion that the difficulty was largely owing to the too close confinement and high feed of the pregnant ewes during the month of February. Fullness of flesh in the mother is unfavorable to the well-being of the offspring before birth. They should be strong and healthy but not fat. It is recommended to allow animals in this condition, succulent food, as roots; to feed sparingly with grain, and not to crowd them in poorly ventilated sheds. They need protection from storms, particularly rain, with plenty of exercise and pure air.

Rabbits in Nursery and Orchard. L. Yories, Madison Co., Ill. Trap the rabbits and make "pot pies" of them. They are easily caught in a common box trap with sweet apples or potatoes for bait, or they will catch themselves without bait if the trap is properly arranged, as they will run into anything that promises them shelter. Where trees have been gnawed by rabbits, bank up earth about them or bind up with clay or cow manure.

Fruit Stock.—J. H. Creighton, Zanesville, O. The Siberian Crab is of too slow growth to make a good stock for the apple. The pear will not do well on the common or Doucain apple stock.

Fruit Queries.—J. Brownell, Washington Co., Pa. The Bartlett Pear does not succeed as well on the quince as upon the pear stock. Apple orchards should be pruned where the limbs are crowded. June and July are the best months. We have already published a list of pears, and shall do so with other fruits, as soon as they can be determined on. Your best course is to rely upon the judgment of successful fruit growers in your district.

Staking Apple Trees.—Subscriber, Coffey Co., Kansas. Doubtless your trees might be staked without injury to the roots. Trees for such windy countries as yours should be grown with branches very low, in the nursery.

Chenango Strawberry Apple.—T. H., Wayne Co., Mich. This is not much known at the East. One of our best pomologists considers it a good third-rate apple, but worth cultivating on account of its remarkably fine appearance.

Trees on Prairies.—Several subscribers in the far West make queries upon this subject. The answer would be too long for a basket item, and, as all the other pages are filled, the reply must wait till the next month. See article on the Willow, on p. 39.

Grafting the Grape.—L. C. J. Townsend, Mass. The grape is so readily propagated from cuttings and layers, that grafting is seldom practised. The cions should be cut before vegetation starts. The grafting is done when the vine is in leaf, and danger of bleeding has passed. The earth is removed from around the vine, which is cut 3 or 4 inches below the surface. The stock is split and the cions inserted in the usual way of cleft grafting. No wax or other composition is applied but the earth is merely replaced. Another mode has been recommended, which is to split a large vine at intervals of one or two feet, and insert the ends of the cions, which are cut to a wedge, in the slits. The vine is then buried horizontally so as to leave one or two buds of the cions above the surface. The vine so layered throws out roots during the season, and in the Fall or following Spring may be cut up so as to leave a share of roots to each graft.

Salt for Insects.—"W. C." Waukesha Co., Wis. We very much doubt if sufficient salt can be used to destroy any kind of insects without injury to the vegetation, while the cost would be enormous. A ton spread over an acre would be only a pound on every twenty-two square feet, and that amount worked into the soil would hardly be heeded by insects. A positive statement put forth by a professedly agricultural journal, that a bushel or two of salt on an acre, would destroy the wire worm and other insects, has gone the rounds of the papers for years. This is the third time we pronounce it nonsensical. When land is plowed in the Fall, the frosts of Winter will generally kill great numbers of them.

Green Manure.—L. Z. Snyder, Montgomery Co., Pa. Millet or oats will make a good crop to turn under before sowing fall wheat. At the present price of oats, millet seed will be much the cheapest. If the soil is infested by weeds, buckwheat may be used. Sow early and plow in as soon as it is in flower, and then sow for another crop to be plowed under first, before sowing the wheat.

Chinch Bugs.—"A Reader," Winnebago Co., Ill. The eggs of this troublesome insect are not deposited in the corn, but in the ground, where the young are sometimes found in great numbers. As they are most numerous in dry weather, and disappear after a rain, it has been proposed to shower the crops to destroy the bugs, by means of a fire engine, but this would not be practicable on a large scale, even if it were effective.

Obtaining Seeds from Washington.—Several inquirers are informed that their best way to procure seeds from the Agricultural Department at Washington, is to make an application through the representative of their own districts, as the seeds are mainly distributed through the Members of Congress.

Seeds Received.—C. H. Howard of Utah sends us seeds of the currants of that Territory, and Wm. Holley of Hall Co., Nebraska has furnished us with the stones of a dwarf cherry of that region. All these have been placed for trial with one of our most experienced cultivators of small fruits.

Seeds for a Name.—W. G. Fowler, O. The plant is *Lunaria biennis* and is called Satin Flower and Honesty. It is cultivated for the delicate membrane which is left after a portion of the pod falls away; this is used in making dry bouquets. It flowers the second year from the seed.

Hubbard Squash.—Robt. Hutchingson, Ashtabula Co., O. The usual shade is a dull, clay blue color. It sometimes is of a dark olive green. Both colors are considered by the introducer as equally pure.

More Beans.—W. C. Comstock of Fairfield Co., Conn., writes that among his beans raised last season, was one plant with 83 pods, containing 456 merchantable beans, of the kidney variety. He planted in drills 10 inches apart, in rows two feet distant.

Red Cabbage.—N. C. Laughlin, Ct. This variety is always small, but should grow larger than the first. The pickle is made by slicing the cabbage, adding spice and pouring *cold* vinegar over it.

Crimson Clover.—J. F. Rucklman, Munroe Co., Pa. We have only seen this cultivated on a very small scale, and the account to which you refer is the only one we have seen of any extensive experiment. The plant is very showy when in flower. The seeds can be had in this city.

Daphne odora.—Mrs. J. W. H., Charlestown, Mass. This is an evergreen green-house shrub which bears clusters of white or pinkish, very fragrant flowers on the ends of branches. It belongs to a widely different family from the Tuberose and resembles it in odor only. If grown as a house plant, it should not be in too hot a room, and should have plenty of air.

Gloxinias and Petunias.—A Reader, New-Hartford, Conn. These are raised from seed and the varieties continued by propagation from cuttings. Gloxinias can be successfully raised only where there is a green-house. Petunias are readily grown in the open air. The seeds may be had at the seed stores, and a paper *may* give you some fine double ones, but if you wish to be sure of these, the best way is to get the plants from commercial gardeners.

Camelina sativa.—A. K. Laughlin, Vt. We have no knowledge of the culture of this plant for its oil in this country. The article in the Patent Office Report was copied from an English journal. It is known by the names of False Flax, Wild Flax and Gold of Pleasure, and is only known in this country as a not very common weed in old fields.

Nemophila maculata is the plant sent by Mary Rider, Holmes Co., O. It is a native of California. The proper name is Spotted Lovegrove. This, with the N. insignis, discoidalis, and others, are among our most beautiful annuals.

Truffles—Tuckahoe.—Geo. H. Gilbert, of Cheshire Co., N. H., in response to the query, whether Truffles were ever found in this country, says that 12 or 14 years ago he was living in Mississippi, and there frequently saw a kind of root that grew in the ground entirely unconnected with any plant or leaf above the surface; it was about 1½ inch in diameter, and 3 inches long, looking quite like a sweet potato. Pigs were fond of them, and he supposed they were a species of Truffles. The substance he refers to is doubtless the "*Tuckahoe*," or Indian bread, a thing which has been a great puzzle to naturalists. It has been classed with the Fungi (Mushrooms) and has been called *Lycoperdon solidum*, but as no vegetable structure has been discovered in it, its real nature remains unsettled. The Tuckahoe has been found as far north as New Jersey.

Dairy Farmer.—California subscriber. There was such a paper published, but owing to the times it was obliged to suspend—temporarily we hope.

Ag'l. Library Association—A Good Move.—J. J. Joslin, Rutland Co., Vt., writes that an Agricultural Library Association has just been formed in the town where he resides, and agricultural works amounting to $250 are already purchased. A "Farmers' Social Club" for discussing appropriate subjects, is connected with the association.

Economical Food.—"Diffidence," of Middlebury, Vt., writes as follows: "In these times of patriotic sacrifice and diminished incomes, many of us would like to learn how to live comfortably on a small sum. No doubt you have many subscribers like myself, not farmers, who take your paper for its *other* valuable contents. Will not some kindly disposed lady reader, who has to purchase everything for the table, with little enough money to do it with, give a list of the 21 meals, such as are eaten in her family for a week? With such a list in the *Agriculturist*, no doubt many of us would be much benefited." [We shall be glad to have responses to the above.—ED.]

How it Paid.—The letters on business, and other topics, received at the *Agriculturist* office, number from 75,000 to 100,000 a year. A single morning's mail, sometimes brings in more than five hundred. These letters very often convey hints and suggestions which are of indirect aid in preparing the paper, when they are not used directly. The letters for two months past have, more than ever before, abounded in kind words of approbation and encouragement, indicating such a spirit of friendly feeling on the part of our readers, as we greatly appreciate and enjoy. Hundreds, perhaps thousands, have recently given an account of some special way in which a single hint from the paper has paid them far more than the cost of it for a year. We take the liberty to give the substance of a private note from a subscriber (J. M.) in Shiawassee Co., Mich. "....Three years ago an auction of bees was to be held, which I had no thought of attending, until just before the sale I happened to read an article on bees in my *Agriculturist*, which led me to buy 13 swarms that averaged $3 each ($39). The two heaviest I traded for a 3-year old steer which I sold for $24, leaving the cost of 11 swarms, $15 net. The first two years I took up 7 swarms, and last Autumn 12 swarms more, and a nice lot of cap honey which altogether paid more than five times over for the care of the bees, and I now have 26 swarms left, which I would not sell at $4 each or $104; so much for the $15 invested. This will pay for the *Agriculturist* longer than I shall live. I am wholly indebted to the paper for my bees, to say nothing of many other good ideas obtained from it, too numerous to mention. The paper is certainly a good investment at $1"

The White Willow Excitement.

Numerous letters have been received at the office of the *Agriculturist* asking our opinion on the use of the White Willow for hedges. Our Western exchanges contain loud advertisements of nurserymen, and those who have the cuttings for sale, and the papers have frequent articles for or against its use. We have watched this discussion with interest, in the hope of finding some reliable information on the subject. From all we can gather, and from what we know of this plant, we judge that, as a screen to break the force of sweeping winds, it will answer a good purpose, but that its value as a hedge plant is as yet rather problematical. As it is destitute of thorns, and the small branches are always weak, it can only serve as a hedge by presenting a barrier of trunks. Whether the willow, or any other tree, will grow when planted near enough together for this, we are inclined to doubt. A given area of ground will only sustain a certain amount of vegetation, and the strongest plants will choke and kill out the weaker ones. This happens in nature, and is within the observation of every cultivator. As a timber belt, to serve as a wind screen, there is no doubt it may be employed with benefit.

The following is the method of planting for hedges: Cuttings about ten inches in length, cut at the lower end with a slope, are stuck into the soil, in a slightly inclined position, at six inches apart. The plants are hoed and weeded the first year, and the cattle kept away until they become large enough to resist them.

The white willow makes a large tree, 50 to 60 feet high. The wood is valuable for charcoal, and makes a tolerably serviceable timber. Taking advantage of the present excitement, some persons have cut up the common willow of the swamps, to sell as the white willow. Those purchasing should be on their guard against this imposition.

The Remarkable Winter—Its Effects upon the Wheat and Rye Crops.

Thus far the present Winter has been noteworthy, we might rather say, there has been a remarkable absence of Winter. At the time of this writing, it is past the middle of January, and yet, with the exception of a very few days, early in December, we have had no snow to speak of, and but little ice in the vicinity of this city. Overcoats have been worn more as a safeguard against expected cold that might come on suddenly, than as a necessary protection from cold actually experienced. Similar weather has prevailed over the country generally, though in a few localities snow has fallen more abundantly. In two respects this weather has been highly favorable to farmers and others. There was so short a crop of hay in many places that apprehensions were entertained in regard to the possibility of carrying the usual stock of animals through the Winter. But mild weather has saved an immense amount of forage, for it is a well understood fact, that in very cold weather, a large proportion of the food consumed by man and beast, is required to keep up the heat of the body. An animal needs nearly double the quantity of food when the thermometer is at zero, than is required when the temperature is at summer heat. Should the season continue thus mild and open, hay will be abundant and cheap during the spring months. "Winter never rots in the skies," is an old adage that generally, not always, holds true, and it will be fortunate for those having short supplies in their hay mows or stacks, if we do not have severe cold weather all through February and March, and late into April. In the Eastern and Middle States, where coal is extensively used, the supply was unusually short last Autumn, and prices were nearly double what they were a year before. This mild weather has greatly favored all who depend upon coal for fuel. Owing to the small amount of fire needed, it has cost less than in ordinary years to keep the dwellings warm.

But we entertain serious fears concerning the effects of this weather upon the winter grains, wheat and rye. A continuous frozen condition of the soil does not injure these crops, while a mantle of snow maintains a somewhat uniform temperature, and is highly favorable. The alternate freezing of the surface at night, and thawing out by day, which has been the order for two months past, must have done great damage to the wheat plants. Many of them have doubtless been killed already, and should this weather continue, we fear the result will be disastrous. Little can be done to help the matter. Those having an abundance of manure, or of straw that will not be used for feeding or bedding, may find it advantageous to cart it out and spread it upon the wheat fields, if they chance to be frozen sufficiently at any time to prevent injury from the treading of teams, and cutting by the wheels. A mulch of this kind will partially prevent the frequent changes of temperature. If our staple crop of wheat is to be in part cut off, as it may already be, it behooves farmers to lay out their plans for putting in the largest possible area of spring wheat, where it will grow well, and of other summer crops.

Tobacco Culture—$30 Offered for Practical Information.

Our assistants report that in at least a thousand letters recently received, there is a call for articles, and especially for a book on tobacco culture. We know of no such work, are destitute of practical experience with this particular crop, and scarcely know where to get the best practical information desired. In order to call out information, we therefore propose the following cash premiums:

For the Best Essay *on Tobacco Culture*.....$15,00
For the Second Best Essay.....$10,00
For the Third Best Essay.....$5,00

The essays to be written by those who speak from practical experience or observation; to contain full directions for culture and treatment; from the securing and sowing of the seed to the harvesting, curing and marketing of the crop; the best variety, etc. Fifteen *pages* or less of foolscap paper will suffice for this; the less space occupied, the better, if particulars are given sufficiently full to meet the wants of those entirely inexperienced. The essays in our work on Onion Culture, (see page 61), are good examples of what is wanted. Any illustrative engravings required, will be made at our own expense, if the outline sketches be furnished by the parties who write. The essays to be delivered at the *Agriculturist* office on or before March 1st. The sooner they can be on hand, the better, that the Committee may have time to look them over. The essays will be submitted to a competent Committee, and the prizes paid according to their award. One or more of the best essays will be published in the April *Agriculturist*, and, if a sufficient number of good articles are offered, they will be issued in cheap pamphlet form, early in March, to meet the requirements of the present year. In order that we may do this, we make it one condition of the offer of the prizes, that we have the right to publish any articles submitted. (Ten copies of any pamphlet or book issued, will be at the disposal of each person whose contribution is inserted, whether he obtain one of the prizes or not.) The writer of each essay will please enclose his name and full Post Office address, in a sealed envelope, along with his manuscript. Fine literary style is not so much desired as to have the directions fully and plainly given; we will put the writing into proper shape for publishing. If those who wish to compete will notify us at once, we can probably announce next month whether a pamphlet will be issued.

Maple Sugar.

This product, which, if properly made, always commands a good price and ready sale, will this year be especially valuable, owing to the high cost of every kind of sweetening. Those having even a few trees, will do well to make the most of them, by commencing to tap as soon as the sap will flow. In many localities a large run may be had the latter part of the present month, unless the Winter should be protracted unseasonably.

Immediate preparation should be made for the work, particularly where there is a large sugar-grove. In such cases it will doubtless pay to procure one of the evaporators intended for Sorghum syrup, but which are equally fitted for sap boiling. Cook's is certainly good. It was used in this way to some extent last year, with entire satisfaction. Samples of sugar and syrup made with it, received at the *Agriculturist* office, were of the very finest quality. (See advertisement in Jan. No.) Shallow sheet-iron pans, which can be made at the tinman's, will be found much more economical than the deep kettles frequently used. Provide a good supply of dry fuel convenient to the boiling place. A shed to enclose the arch and kettle will add to comfort and cleanliness. Buckets of tin are lightest to carry, but are apt to be rusted during the year, which would impart a dark color to the syrup and sugar. Unpainted pails, of cedar, pine or white-wood, are generally preferred. These, with the evaporator, the spouts, and everything connected with the manufacture, should be kept scrupulously clean. The need of clarifying syrup, arises mainly from neglect in this respect; the best specimens we have seen were made without the use of any substance to remove impurities—none were suffered to be mixed with the sap.

Fig. 1.

Spouts are readily made by removing the pith from pieces of elder, or from foot lengths of inch square pine. For the latter, remove the upper half to within two inches of one end, bore or burn a one-quarter inch hole through the thick part left, and cut a groove from the hole to the other end, as in fig. 1. If elder stalks are accessible, good spouts are made as illustrated by fig. 2, by sawing half through at *a* and *b*, and splitting between the cuts. Each piece then makes two spouts.

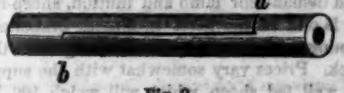


Fig. 2.

A three-quarter inch auger bit is best for tapping, which should be done on the south side of the tree, boring the hole about one inch deep.

It saves time after the boiling is commenced, to have a constant stream of sap trickling into the evaporator, and the thickened syrup discharging into a second vessel for "sugaring off." Otherwise, the sap collected must wait until the first lot is finished. In the latter part of the season it readily sours, and may soon spoil. It is well to add a little lime to the sap during the last running, to neutralize any existing acid.

No Time to Run in Debt.

An Ohio Reader asks: "Would you consider it *prudent* for a farmer having a hundred acres paid for and well stocked, and out of debt otherwise, but not having a comfortable domicile, to incur a debt of five or six hundred dollars in building a dwelling house?"—We think not. In the November *American Agriculturist*, we referred to the effect of the increased relative value between gold and currency, and showed why farmers should seize upon this time to get out of debt and keep out. The recent further advance in gold gives additional force to the reasons then set forth. Currency that will pay debts is now very abundant and will probably be more so for a time. The moment the war closes, or bids fair to close, the country will begin to turn to a specie currency; and then look out for breakers. What now is called $150 will begin to recede toward $100. A debt of $100 contracted now, when wheat is at $1½ per bushel in this city, will probably have to be paid, when wheat will be worth only $1. This will not probably take place at once, for there will be a large amount of "legal tender" currency to be retired from circulation before specie will be the legal standard, but the change must sooner or later take place. If the old house is at all tenantable, or can be made so with a little outlay, better put any surplus funds aside, where it will be absolutely safe and can be called in dollar for dollar. Then when prices of labor, of timber, and of other materials fall, the money and its interest can be used to far greater advantage. If there be a mortgage upon the farm or house, poor crops and low prices may perhaps not enable you to meet it. This flush period is just the time to get out of debt, keep out, and lay by as much as possible.

Mutton Trade of New-York.

145 MILES OF SHEEP.

Few persons are aware of the extent to which sheep are sold in this city. Including those received at the four public market places, and those sent directly to butchers, an average of over 10,000 live sheep per week were slaughtered in this city during the past year. Besides these, there are at least 1,000 dressed carcasses received weekly. If the whole number were driven in at one time, three abreast, allowing four feet of space for each sheep, the line would extend from New-York to Albany, a distance of over one hundred and forty-five miles.

Since the commencement of the war, the demand for wool has so greatly increased that farmers are adding largely to their flocks. They find that, with the high prices of wool and the good demand for lamb and mutton, sheep-raising is one of the most profitable branches of farming, and they are now holding back their stock. Prices vary somewhat with the supply, but well fed sheep, which will weigh 100 lbs., alive, have been selling at $5½ a $6 per head for a month past; they are now (Jan. 15th) worth $6½. The rise in wool has added largely to the value of pelts, mixed lots of these selling at $2½ each, and selected pelts at $2¼ each.

In former years the thin ewes have been bought up by farmers for store sheep, at $2½ a $3 per head. Of late this class has been mostly kept in the country. Those sent to market have been bought up by butchers at $3½ a $4 each. Contrasting with this class are a limited number of extra large fat sheep, usually sent in about the holidays and sold at high prices. A few have brought as high as $15 a $20 each. Three full blooded Leicester sheep, from Canada, were recently sold to a butcher of this city for $70. They dressed 471 lbs. The pelts would bring $2¼ each, which would leave the cost of the mutton a little over 12 cents per pound. In view of these figures it is safe to advise the raising of *more sheep* and *fewer dogs*.

Breadstuffs, Meat, etc., for 1862.

All classes of readers will be interested in the two statistical articles given on pages 58 and 59. The tables have been specially prepared for the *American Agriculturist*, with great care and no little labor, and they are arranged to show at a glance the amount of transactions in some of the leading articles of farm produce in the great central market of the country for the year 1862. A comparison with the previous three years is also given, together with tables showing some of the transactions in breadstuffs at Boston, Philadelphia and Chicago. The following table shows the receipts at New-York of the leading articles of Grain, with the prices and total sums paid for them. This table includes only the amounts received through regular channels and recorded at the Corn Exchange or Custom House. Large amounts, not here included, having been sold "to arrive," have gone directly to receivers without being recorded, while other amounts have come in by irregular routes. The prices in this estimate are the average of the average prices on the 20th of each month, as given in the second table:

RECEIPTS AT NEW-YORK FOR 1862.

Kind.	*Amount.*	*Average Price.*	*Value.*
Wheat Flour	5,757,606 bbls. at	$5.71	$32,875,941
Wheat	27,079,259 bushels at	1.37	37,098,584
Corn	17,290,234 bushels at	64	11,065,748
Rye	932,084 bushels at	83	773,629
Barley	1,151,818 bushels at	1.05	1,209,408
Oats	5,051,874 bushels at	50	2,525,937
Total for Flour, Wheat and other grains			$83,549,247
Total amount for same articles in 1861			$81,216,587

PRICES IN 1862.—The following table gives the New-York prices of leading articles on the 20th of each month, the date of making up our monthly reports. A careful estimate indicates that for the average of all sales of the different grades, we may take: for *Wheat Flour* the highest quotations for "Extra State;" for *Wheat* the highest quotation for "All Kinds of Red;" for *Corn* the highest quotation for "Mixed;" and for *Oats* the highest quotation for "Western."

NEW-YORK PRICES ON THE 20TH OF EACH MONTH IN 1862.

1862.	*Flour.*	*Wheat.*	*Rye Flour.*	*Corn Meal.*	*Corn.*	*Oats.*	*Rye.*	*Barley.*
	$ c.	$ c.	$ c.	$ c.	c.	c.	c.	$ c.
Jan....	5,90	1,45	4,30	3,50	66	42	84	80
Feb....	6,10	1,50	4,35	3,60	65	41	85	90
March.	5,70	1,45	4,25	3,25	60	39	83	1,00
April..	5,10	1,35	4,25	3,15	59¾	39	82	1,00
May....	4,85	1,15	4,25	3,20	51½	41	76	85
June....	4,75	1,20	4,00	3,30	54	44	75	75
July....	5,25	1,28	4,10	3,25	70	47	78	..
August	5,40	1,40	4,30	3,75	68	51	83	..
Sept....	5,70	1,31	4,40	3,75	60	58	83	..
Oct....	7,90	1,60	4,75	4,00	68	59	84	1,25
Nov....	6,40	1,45	5,25	4,25	71	69	90	1,60
Dec....	6,40	1,47	5,05	4,50	77	70	97	1,45
Av'ge..	5,71	1,37	4,54	3,57	64	50	83	1,05
Av'ge in 1861.	5,30	1,37	3,46	3,05	60	36	70	68

It will be seen by the tables and remarks on page 59, that the receipts of wheat and flour, taken together, were lower in 1862 than in 1861, but the higher prices the past year raised the total product of sales here, to a greater sum.

The Live Stock Table, as exhibited on page 58, is also interesting. The total number of live animals destined for slaughter received at the regular yards, reached **1,845,605**, or nearly *two million head!* Of these more than one-half (1,098,712) were live hogs, or about twice as many as were ever brought to this market in a single year before. But the items are so fully set forth in the article on page 58 that no further explanations are needed here.

The Department of Agriculture.

The doings of the Agricultural attachment of the Patent Office, were so severely criticised by this and the other agricultural papers of the country, that a new Department was created to manage the agricultural operations of the government. With the change we looked for a new policy, one which should be of actual benefit to the agricultural country, and which should not interfere with the legitimate business of seedsmen, nurserymen, and others. Thus far, there does not seem to be strong reason to hope for a change for the better. Two small pamphlets emanating from this Department are before us. One of these is mainly devoted to informing the world what a great country this is, and the other is a catalogue of the Plants, Bulbs, Tubers, etc., which are ready to be sent out from the "propagating garden," of this country noted for its immense resources.

Upon looking over the limited list we find it to be composed, with but very few exceptions, of plants which can be obtained at any nursery. It is gratifying to know that there are ready, 80 varieties of gladiolus—why we have not hyacinths and tulips, and the rest of the bulbs is not mentioned. Then there are 100 specimens of the Mist-bush or Smoke tree (*Rhus Cutinus*), which was introduced into England in 1856, and is to be found in almost every old garden in the country. "A *rare* old plant is the ivy green," but the U. S. has managed to propagate 600 plants. That novelty, the Chinese Yam, can be found at Washington, and the common Prickly Pear is to be had in small quantities. For the credit of the country, we call upon the authorities to burn up or quietly dispose of their old rubbish, and to stop distributing plants or seeds until they have something which comes within the letter and spirit of the law, and are able to "distribute among the people, *new and valuable seeds and plants*."

Brine Poisonous—A Caution.

During past years we have published in the *Agriculturist* occasional reports of bad effects from feeding to animals salt from meat barrels. In a recent number of the Honesdale (Pa.) Herald, we find an account of the sudden death of several valuable imported hogs after eating food mixed with brine from a beef barrel. In this case the evil effects are attributed to saltpeter (nitrate of potash) used in curing the beef. Whether it was the nitre, or the salt, there have been a sufficient number of instances reported, to render it hazardous to allow any animal to consume either the salt or brine, from any kind of meat. Salt food of any kind is destructive to fowls, and care should be taken to keep them from house slops containing salt. But refuse brine and salt are excellent on the asparagus bed, applied in Autumn or Winter, or at any time except in the cutting season. It even pays to put on a good layer of new salt. Refuse brine or salt is also good on most soils, and on most field or garden crops, and should not be wasted.

Kindness is a language, which not only the dumb can speak, but the deaf can understand.

The Indian's View of Agriculture.

We doubt if a better argument for improved agriculture can be given, than is found in the speech of an Indian chief to his tribe at the West. It ran thus: "Do you not see the whites living upon seeds, while we eat flesh? That the flesh requires more than thirty moons to grow up, and is then often scarce! That each of the wonderful seeds they sow in the earth returns them an hundred fold? That the flesh on which we subsist has four legs to escape us, while we have but two to pursue and capture it? That the grain remains where the white man sows it, and grows. That Winter with us is the time for laborious hunting——to them a period of rest. For these reasons, they have so many children, and live longer than we do. I say therefore unto every one that will hear me, that before the cedars of our village shall have died down with age, and the maple trees of the valley shall have ceased to give us sugar, the race of the little corn-sowers will have exterminated the race of the flesh-eaters, provided their huntsmen do not resolve to become sowers." History shows the truth of these prophetic words.

A Double Action Root Cutter.

Farmers are beginning to learn the value of root crops, and their increasing consumption has led to the invention of several machines for slicing or reducing roots to a condition for feeding. We present an engraving of a very good one, lately introduced from England. Its novelty consists in the cutting knives. These are of steel, placed on a wrought iron cylinder, (Fig. 1) which revolves in the box of Fig. 2. At the lower part of the cylinder as represented in the engraving, is seen one of these knives extending the whole length,—it has an irregular cutting edge elevated about an inch above the cylinder, and an opening below, which communicates with its interior. The box in which the cylinder revolves has cast iron sides. If the hopper is filled with roots and the cylinder turned in the direction of this cutting edge, they are rapidly sliced by the knife, the pieces passing into the cylinder and falling through its open ends below. There are two knives of this kind which divide the roots into rather large slices, suitable for cattle. For cutting

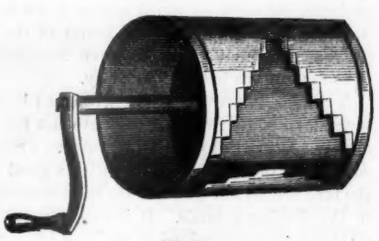


Fig. 1.

smaller, or finger pieces, for sheep and calves, there are two other sets of knives, one of which is represented in the engraving, at the side of the cylinder. These are stout blades about an inch long, and are placed in the form of a letter V, with their cutting edges facing those of the large knives. By rotating the cylinder in the direction of these blades, the roots are reduced to quite small fragments. By turning to

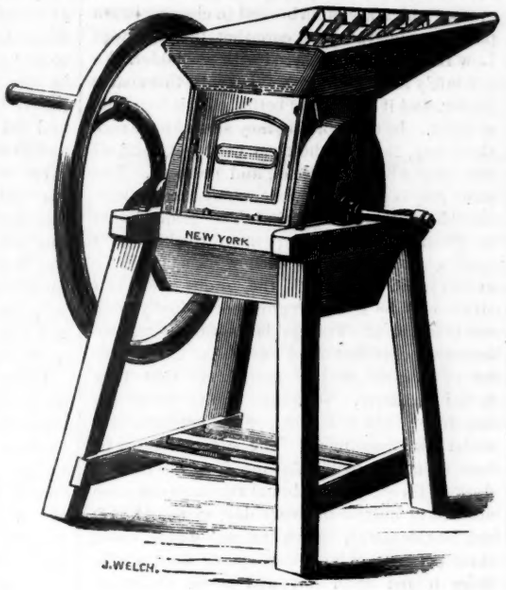


Fig. 2.

the right or left, the pieces are cut large or small as may may be required. The roots when fed to the machine, are thrown upon an inclined iron grating, which forms one side of the hopper, through the openings of which any loose dirt or small stones may fall out. The machine will readily cut a bushel of roots in from 10 to 15 seconds, is substantial in make, and requires no adjusting, as it cuts fine or coarse by merely reversing the direction in which the crank is turned. The N. Y. manufacturers' price is $35.

Mulching Wheat.

H. M., of Kent County, Maryland, writes to the *American Agriculturist* as follows: In 1858 I had a field seeded, part of which was a basin of loamy, spongy, black soil. On this portion of the field the frosts of Winter did their work so effectually, that I did not get my seed at harvest. During all the freezing weather the soil looked like a honey-comb; and in the Spring, the wheat which the land had thrown out, might be gathered up in handfuls. In the fall of 1861, I sowed the same land, and immediately covered the whole basin with old wheat straw; last harvest this was nearly the heaviest of the field. Now, for the science of this: I imagine it consists in the fact that the straw serves not to keep the land from freezing, or the wheat from being thrown out, but to protect it from the air and sun, and afford moisture to the roots until they can again fasten upon the soil. It may, however, be that the mulch acts in some degree as a protection from excessive cold. (*a*).

One of my neighbors having similar land and looking about for a remedy, was told by a Pennsylvania farmer to sow one and a half bushels of gypsum to the acre on such land after being seeded. He tried this with good effect, the supposition being that the weight of the gypsum kept the soil more compact and prevented the throwing out of the plants. What think you? (*b*.)

I suppose, of course, that thorough drainage would operate as a permanent cure of such soils; but with us, where stones are not to be had, and tiles are very costly (owing to transportation), the next best plan seems to be the one I have suggested, giving, besides, a coat of manure. (*c*).

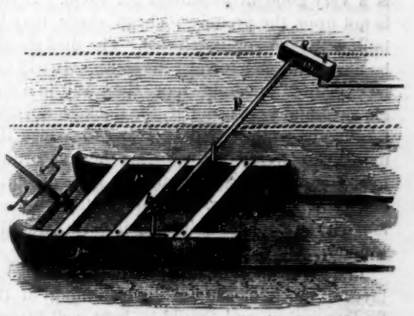
(*a*.) Excessive cold is less injurious to winter grain, than the alternate freezing and thawing by which the roots are broken and the plants "thrown out" on wet soils, by the repeated expansions and contractions of the earth around them. Any covering of light material capable of holding considerable air, as snow, straw, leaves, etc., serves as a regulator of the temperature. Thus, on a warm day the air contained in the mulch being a poor conductor of heat, will partially prevent the soil beneath it from thawing, and during the cold nights it will partially retain the warmth gathered during the day, and prevent hard freezing. The mulch may also protect some of the roots from being killed, until they can fasten upon the soil, as suggested by our correspondent, but its chief value is probably due to the facts noted above.

(*b*.) One-and-a-half bushels of gypsum, sown broadcast over an acre of ground, would have no appreciable effect on the compactness of the soil. In the case mentioned above, the grain was probably stimulated to strong growth by the plaster, and the Winter being very favorable, the yield chanced to be better than ordinary.

(*c*.) Yes, draining is the *cure*. Where neither tile nor stone drains are available, wood drains as described in the June *American Agriculturist*, 1861, (Vol. XX, page 169) will usually answer a good purpose, for a few years at least.—Ed.]

A New-Jersey Corn Marker.

P. S. Brokaw, of Somerset County, N. J., writes to the *American Agriculturist* as follows: I propose offering your Iowa correspondent (C. J. Rhodes, in Jan. No., p. 15) a New-Year's present, in the form of an improvement on his corn marker. When about dispensing with the common plow in marking for corn, some years ago, we tried his plan among other things; but by perseverance in experimenting, we have found the common block sled, with the improvement represented in the annexed sketch, far superior. 1st. It is much lighter, and requires less room in housing; 2nd. There is no need of stakes, set up in the field as guides, especially if



there are two straight sides to the field; 3d. the marks will all be of uniform width, which is of great importance in the after cultivation of the crop by horse power. In making the implement, the runners, *r*, *r*, are, of course, set as far apart, as the rows of corn are intended to be. To the middle of one of the beams, *b*, a guide-pole, *p*, is attached, so as to admit of its being swung over to operate on either side of the sled. This pole is made twice the length of the distance between the runners: thus, if the rows are to be four feet apart, the guide-pole must be

eight feet long. On the outward end of the guide-pole, a shoulder is cut, to enter a hole in the block, *m*, which is to serve as a marker. The block turns on the pole, when the latter is changed from one side to the other of the sled. A stout pin is set in the lower end of the block, at right angles with it, to make a distinct mark on the surface of the ground. Two pins are also placed in the top of the runners, to keep the guide-pole in place, when in use.

In operating with the marker, the driver takes his place upon the sled, and marks the first two rows by following guide stakes, or the line of the fence. The guide-pole being swung over on the side of the unmarked land, the marker traces a line in the center of the space between the next two rows, and on reaching the end of the field, the horses are turned, the guide-pole reversed, and the team is driven so as to keep the guide-line exactly between the horses, and thus the rows are made parallel with those previously marked.

Winter Management of Sheep.

The old practice of leaving sheep to shift for themselves whenever the ground was bare, is now abandoned by all good flock masters. It is not denied that they can gather a good deal of nourishment from the meadows, if they have not been picked too bare, but the grass is of poor quality, frost bitten, and is insufficient in quantity. It interferes with the regular habits of feeding the flock, which is a matter of some importance with the shepherd, and a good deal more with the flock. After they are once yarded in the beginning of Winter, it is better to keep them in confinement, unless it be for a run of an hour or so, on very pleasant days.

Sheep want shelter from the storms and protection from bleak winds, and no man should attempt to keep them in the Northern States, unless he can furnish covers for them. These need not be expensive. The instinct of the sheep prompts it to seek high, dry lands, especially for lodging, and such a locality should be selected for the barn. They want protection from the snow and rain more than from cold. They will bear a very low temperature without inconvenience, if their fleeces be dry. A barn-cellar in the side of a gravelly hill, with a yard attached, is a very good arrangement for them. If this is not upon the premises, cheap sheds may be built with board or thatch roof. The shed should be deep and open toward the south. It will not be expedient to confine more than fifty in a single shed and yard; and if the flock be not uniformly vigorous, it will be better to reduce the number to twenty five, assorting them according to size and vigor, so that all may have an equal chance at the fodder. If this matter be overlooked, the stronger animals will push away the weaker, and take the choicest portion of the food.

The barn-cellar, or shed, should have a good layer of muck or loam at the beginning of the feeding season, and should be kept well littered with straw or refuse hay; then the manure will not become prejudicial to health, and may remain until they are turned out to grass. The sheds should be furnished with convenient racks for feeding hay, grain, and roots. The sheep demands a greater variety of food than any other domestic animal. It is said that Linnæus, the distinguished botanist, offered a variety of fresh plants in succession in feeding horses, and found that they ate 276 species and refused 212; cattle ate 276 species and refused 218; while sheep took 387 species, and refused only 141. This shows that a good many plants that are rejected by other animals, may be turned to profitable account in sheep feeding. We may save the small shrubs and weeds and coarse grasses which are often burned in clearing brush pastures, always taking care that the poisonous Low Laurel be not gathered with the fodder. We can safely feed them once a day with this coarse fodder, and it is perhaps better that it be given at night. In the morning they should have nice short hay, the best the farm produces, and all that they will eat up clean, and no more. The same rule is good for the noon-day meal, which should be of roots or grain. The grain should be given whole, as sheep are furnished with good masticators, doing their work as perfectly as any mill. Nearly all the grains and their straw may be fed, changing occasionally from one to the other. Turnips, beets, carrots and potatoes are excellent food for sheep. It is a matter of a good deal of importance that they be fed regularly. No animal knows better the appointed hour of feeding, or is more impatient under disappointment. The stomach must be kept quiet by regular feeding, if we wish the flock to thrive. They should also have the same amount of nutriment every day, as nearly as it can be calculated. Each animal wants about three per cent. of its live weight in food, a little more if fed upon hay and roots, exclusively. If a sheep weigh a hundred pounds, it should have, say half a pound of corn or an equivalent in other grain, a pound of good hay, and two pounds of straw, the three being nearly equivalent to three pounds of good hay. A little observation will soon fix the quantity needed, and prevent over or under feeding, both serious errors. Water should be carefully supplied to the flock, and if it is spring water that never freezes, brought in a pipe to a trough in the yard, it is all the better. If a sheep falls off in flesh or grows weak, it should be immediately removed where it can have a full supply of food, without struggling with stronger animals. Salt should always be kept in the yard, where sheep can have free access to it. By attention to these small matters at this season, the flocks will be kept in good health and come out robust in the Spring, with full fleeces.

Lustre Wooled Sheep—The Lincolnshires.

The term lustre wool, is applied to fleeces of long staple, possessing a bright or lustrous appearance. The Cotswold and Leicester breeds are the best known of this class, in this country. The wool is in large demand, particularly for the manufacture of what are termed alpaca fabrics. These derived their name originally from the animal (alpaca) producing the silky hair, that gives a lustrous appearance to the goods. The fitness of lustre wool for the above purpose, gives it a value above what it would possess, if graded only by the standard of fineness, and it is worthy the attention of sheep breeders to inquire whether coarse-wooled sheep of this class may not bring a better profit than the favorite Merino and Saxony breeds, or even the middle-wooled South Downs. The latter breed is rapidly and deservedly becoming popular, particularly for supplying superior mutton; but some of the coarser wooled varieties may be equally profitable by greater weight of carcass. In England, considerable attention is being attracted to the Lincolnshire breed, for which their advocates make special claims as lustre-wooled sheep. A recent writer in the Mark Lane Express, gives figures which will interest sheep-breeders. He states that the clip of six flocks of Lincolnshire long-wools, numbering 2,289 fleeces, yielded 24,917.66 lbs., or a little over 10¾ lbs. per head, which at present prices of wool of that grade would yield nearly $5 for the fleece of each sheep. These are said to be "good clips," but by no means the best to be met with. As to weight of carcass, extraordinary instances are mentioned, of 261, 284, 364, and 386 lbs. per sheep, of two to three years old, and 50 to 75 lbs. per quarter is said to be common.

The writer of the above statement is of opinion that the Lincolnshires can be successfully introduced, wherever good natural pasturage can be found, and good turnips, or good clover can be produced, but that it is useless to attempt their introduction into mountainous or even very hilly districts. They are particularly suited to rich valleys of those districts not subject to frequent changes of weather.

Due allowance must of course be made for the enthusiasm of one who makes this or any particular breed of animals a hobby, but the facts set forth are worthy of consideration. We are not aware that the Lincolnshires have been tried to any extent in this country. If any readers of the *American Agriculturist* have experimented with them, we should be pleased to have their notes for the benefit of the community. *

For the American Agriculturist.

Improvement of Pastures.

The condition of the pastures in many of the older dairying districts is a sad spectacle. Farms that would once carry forty cows, and make eight thousand pounds of butter, will not now support half that number. In the familiar language of these districts, the land has been "cowed to death." The pastures have been fed by cows from time immemorial, receiving only the manure dropped by the animals during the day. Three fourths of all that the land produced was carried away to the yard, and none of this came back. The soil grew thin, and the grasses died out for want of nourishment. What can be done to bring up such pastures?

An ounce of practice is said to be worth a pound of theory. It is, undoubtedly, if of the right kind. In the Spring of 1860 the writer came into possession of a two acre lot of run-down meadow. It was used as a pasture because there was not grass enough upon it to pay for cutting. As it was convenient to the house, I used it for yarding the cows at night. They were pastured elsewhere a part of the time, and thus all the products of these two acres, and nearly four more beside, were dropped upon the soil by the cattle. There has been a very great improvement in the yield of grass the past season, and the lot, if used for meadow another year, will probably cut twice as much hay as it did in the Summer of 1860. The whole secret of the improvement is, that more has been returned to the soil than has been taken away.

A similar improvement is witnessed in pastures devoted to sheep, if they are not fed too closely. Every thing the land produces is returned to it by the sheep, together with a good deal the land would not get, but for the intervention of the feeding animals. It is sometimes claimed that nothing is gained to the land by passing the crops through the bodies of animals; that a hundred pounds of hay rotted upon the land, is worth just as much as the hundred pounds fed out and returned in the shape of manure. But this can not be so, for the animal draws some elements of its body from air and water, as well

as hay, while the manure quickens the energies of the soil, as the rotted hay would not.

It is well known in the districts devoted to the feeding of fat cattle, on the ridges of Dutchess and Putnam counties, and the western part of Connecticut, that lands once poor, or nearly run out by hard cropping or pasturing, have been brought up to very great fertility, by plaster and feeding animals. From one to two bushels of plaster per acre are sown every year, and fattening cattle three years old and upward are kept in them from Spring until Fall. When the animals are turned in they have their *frames* already made, and there is no great draft upon the soil for bone earth. The whole grass is returned to the soil in the manure, except the little carried off in the gain of the cattle. Some times a change of stock from cows to fattening bullocks, or to sheep, will be all that is necessary for improving a worn out pasture. If cows are kept, there must be top-dressing, or alternation from pasture to hoed crops, with heavy manuring. If the land is not arable, top-dressing with compost or with plaster in districts where it does good, will be sufficient. CONNECTICUT.

Manuring or Mulching.

There is much to be said in favor of top-dressing grass-lands in the Fall with coarse manure. It protects the roots from the severity of frost, also from the cold drying winds, which often prevail when the land is bare of snow. Meadows so protected come out in the Spring earlier, brighter and stronger. This no one will deny. But is this result owing chiefly or altogether to the action of the manure as a fertilizer? Doubtless some of it finds its way to the roots in liquid form, but not much in Winter. The benefit comes largely from its action as a protecting mulch. And if so, the question arises whether this is good economy, at least where the land is poor and manure so expensive as it is at the East. When practicable, why not dress the grass-lands with a thin coat of straw, leaves, or sea-weed? Meanwhile, let the manure be carefully housed under sheds near the barn, where it will be improving all Winter, and be in a perfect state for application in Spring. Perhaps some of our progressive farmers will try the experiment, on a small scale. Mulch one piece of sward this Fall with straw, and another with manure. In the Spring see which looks best. Give both the same amount of manure in the spring-plowing, and see which yields the best crops. The subject is an interesting and practical one.

Farm Notes from Minnesota.

H. A. Farmer of Goodhue Co. gives to the *American Agriculturist* some notes on farming in Minnesota, from which we extract the following: Having to stack a part of his corn, he adopted the following expedient for loading and unloading shocks: "I had thirteen ropes, used for tying cattle; one of these I would slip-noose around a shock, draw it up snug, pass the end of the rope to the man on the load, and then, with a vigorous toss and pull, land on to the wagon a shock, that would turn out a bushel and a half to two bushels of ears, leaving the rope on every shock—thirteen making a load. To unload, drive to the end of the rick, run a wide plank to the wagon rack, take hold of the rope, shoulder arms, and walk the plank."

The following is his method of managing his straw stack: "I keep thirty head of cattle, young and old, and my straw is quite an item for their winter forage, but I dislike to force them to eat it. I had thirty-seven acres of wheat handy to the cattle yard, which I drew up and stacked in two stacks, and while topping out, I spinkled salt over every layer of bundles. When it was threshed, of course, the salted straw was at the bottom of the straw stack. The result was, that my stock ate the straw with avidity, and made themselves very comfortable sheds about the straw stack. The salt made no difference with the grain."

For the American Agriculturist.

How Much Pork in a Bushel of Corn?

It is important that hog raisers should know how many pounds of pork can be made out of a bushel of corn, that they may decide whether it will pay best to sell their corn or feed it to hogs, at the existing prices of each. I have been making some experiments and taking some notes which may interest many of your western readers, as it would interest me to see similar notes of plans and results of others.

On the 13th of September last I had on hand 120 head of hogs, various sizes, from sucking pigs up to 250 lb. hogs. The lot weighed 8,500 lbs., and all run together in an 8 acre lot, about 6 acres of which is set with white clover and blue grass. I fed them from September 13th to December 1st, 660 bushels of corn, by throwing it to them dry on the ground, together with all the stove coal ashes and salt they would eat, (the coal was fed to neutralize any acid in the stomach, caused by high feeding, and prevent cholera or other diseases.) They were furnished a dry place to sleep in. On the first of December I sold 7,806 lbs. of fat hogs, and found the entire lot had gained 9,702 lbs., or 14.7 lbs. for each bushel of corn fed. They are mostly a cross between the Berkshire and Suffolk, with the Berkshire predominating; some few have a cross of the Chester White. HOG RAISER.

Ridge Farm, Illinois.

Notes on Flax Culture.

The numerous inquiries upon the subject of flax culture received at the *Agriculturist* office, from different sections, show that the attention of many cultivators is already turned to this crop, which at present promises to be a remunerative one for the coming year at least. The following information derived from many sources will be of value to those inexperienced in growing flax, and we trust that any difference of treatment called for by peculiar circumstances of location and soil, and additional suggestions from those experienced in the business may be communicated in time to be of use to our readers before putting in the spring crops.

Flax prefers a rich sandy soil, but grows well upon any land that will yield good corn. A fine deep tilth of rich soil with good draining will give the best crops. It is almost useless to attempt the cultivation of this plant on a wet field. It is essential that the ground be free from weeds. In Europe, where labor is cheap, the flax fields are regularly weeded; here, the process would be too expensive, and hence the cleanest land should be selected. Flax may well follow corn or oats, or be sown directly upon a clover sod. In the latter case especially, it would be better to plow the land the previous Autumn, leaving it in ridges, to allow the vegetable matter to decay, and be more thoroughly mingled with the soil by replowing and harrowing in Spring. Heavy manuring is beneficial in increasing the yield of seed, but it makes the fiber coarser and less valuable. Flax will doubtless do well after any previous culture that has left the land "in good heart" and free from any troublesome weeds.

The quantity of seed per acre varies with the purpose of cultivation. If the object be to secure seed only, three pecks per acre is ample. When sown thus thinly the stalks throw out more branches, and a larger quantity of seed is produced. Where the crop is grown for the fiber alone, from one and a half to two bushels per acre is used, according to the strength of the land. In some districts of Europe where the finest linens are produced, as high as three bushels per acre are sown. It will probably pay best to sow with reference to raising both seed and fiber; then one bushel, or on strong land, five pecks per acre will be the proper quantity. The seed may be obtained at almost any city seed store. That of good quality will be smooth, slippery, and will sink in water. It should taste sweet when chewed, and being broken, should appear of a light yellowish green color, and very oily. If large quantities are required, it would be well to correspond with those in the trade at Cincinnati or St. Louis, which are commercial centers of the large flax growing districts, where the seed is chiefly the object of culture.

The time of sowing, of course, varies with the latitude; the rule is to get in the crop as early as can be done without danger from frost. In Rensselaer and Washington Co.'s, in N. Y. State, about latitude 43°, where large quantities are cultivated annually, it is usually sown from May 1st to 10th. The seed is thrown broadcast, and it requires considerable care to scatter it evenly. Calm weather should be chosen for the work, or if that be not possible, the sower should always work with the wind at his side, blowing alternately on his left hand and on his right as he paces up and down the field. A more uniform distribution of seed could be secured by going over the ground twice, and sowing half the amount of seed each time. The quicker the flax germinates and appears above ground, the better the crop is likely to turn out. On this account, it is a great advantage when the sowing can be done immediately before a shower. If there be drouth at the proper time for putting in seed, its effects can be partially guarded against by a deep thorough harrowing immediately before sowing. The seed is to be harrowed in lightly, and the use of the roller after this last harrowing will be beneficial especially on light soils. Details as to harvesting and subsequent treatment of the crop, will be given in a future number.

We will add a few items in answer to those asking special information on the subject: The average yield of an acre of good land is a ton of rotted flax, and from ten to twelve bushels of seed. A ton of rotted flax properly treated, will give from 450 to 500 lbs. of dressed flax, about 70 lbs. of coarse tow, and 12 to 15 lbs. fine tow. It would not pay to transport flax in the straw to any great distance; if properly broken, some 60 per cent. of the woody part may be separated, and then it can be profitably baled and sent to market. The brake for this work described in the January *Agriculturist*, (p. 12), can be as readily moved from one neighborhood to another as the ordinary threshing machine, thus enabling the farmers of a large district to prepare their straw for transportation.

American Jute.

At the present time there is great interest in every plant which promises to be available for fiber. In the January *Agriculturist* a brief notice was given of the American Jute: which has called out numerous queries as to the appearance of the plant which furnishes it; we give an engraving of the flower, leaf and seed vessel. This sketch, which is about half the natural size, will enable any one to recognize it among our wild plants. The flower is generally rose-colored, but is sometimes white, with a crimson centre. The lower leaves are more irregular in outline than those represented in the engraving, and all are covered on the lower side with a light-colored, velvety down. The plant varies somewhat in different localities, and it was formerly supposed that there were two species, which were named *Hibiscus Moscheutos*, and *Hibiscus palustris;* but they prove to be the same plant growing under different circumstances, one on the sea-shore and the other inland, and the former name (*H. Moscheutos*) is retained.

Though the plant grows most abundantly in the neighborhood of salt water, it is not very rare in the interior. It will probably grow almost anywhere, but will doubtless flourish best in low grounds. We have for several years cultivated it for ornament, in a very sandy spot, where it grew with great vigor. The plant may be raised from seed, or by dividing the large clumps of roots. All our knowledge of its alleged value as a fiber producing plant is obtained from the statement of the patentee employing it for that use. We only notice it as one of the articles now claiming a share of public attention.

Flax Cotton.

An interesting sample of batting made from flax has been placed on the *Agriculturist* Exhibition tables. It is intended for quilting dresses, comforters, and such other purposes as cotton batting is employed for. The specimen was made at a factory in Lockport, N. Y., which is the center of a large flax raising district. The flax straw is first pressed through a brake, the invention of Stephen Randall, of Rhode Island, which consists of a series of fluted rollers so geared that they run at different speeds, thus producing a motion by which the fiber is freed from the woody portion. After passing through a duster, which further cleans it, the fiber, if required white, is bleached, dried and carded. In making yarn or twine, suitable machinery, similar to that used in the manufacture of cotton, is employed. It is the intention of the company to supply an article which may be mixed with wool or cotton in fabrics, to make twine, crash, bags, railroad car backing, and similar goods.

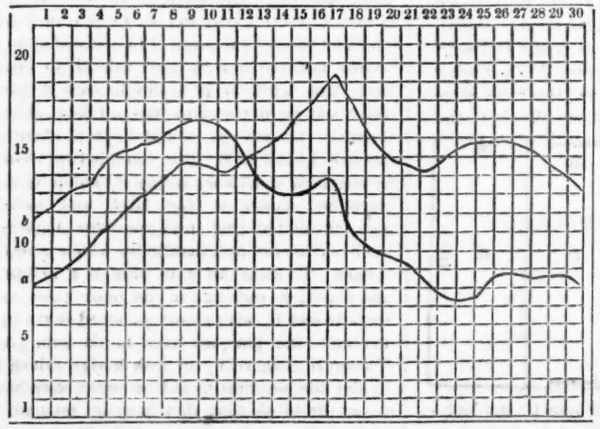
About the Weather.

The remark is often made, that this or that month has been unusually cold or warm. A few very hot or cold days are apt to give the impression, that the month or season has been very different from the average, with respect to temperature. But the same month through a series of years shows a great uniformity of temperature, and the years, taken one with the other, vary but little. The following table of observations, taken by Mr. H. T. Haviland, at Brooklyn, N. Y., gives a striking illustration of this. Here, but one observation each day is made use of —from May 1st to Nov. 1st at 6 A. M.; and from Nov. 1st to May 1st, at 7 A. M. It will be seen here, that the average of January and July together, give very nearly the average of the year; and so with the other opposite months. It must be borne in mind, that the average of 47° is not the mean of the year, but only that of the morning observation. Observations taken in New-York city six times a day, during nine years, gave never less than 53°, nor over 55°, as the average temperature of each year:

	1858.		1859.		1860.		1861.		1862.	
January...	33°	*Av.*	28°	*Av.*	29°	*Av.*	27°	*Av.*	28°	*Av.*
July.....	67°	50°	66°	47°	65°	47°	66°	46½	65°	46½
February..	24		31		27		31		27	
August....	65	44½	65	48	66	46½	65	48	66	46½
March.....	32		39		37		34		33	
September.	59	45½	59	49	58	47½	59	46½	61	47
April.....	44		43		43		43		42	
October...	52	48	47	45	50	46½	53	48	52	47
May.....	50		54		53		49		53	
November.	38	44	42	48	43	48	39	44	41	47
June	65		61		61		62		60	
December.	33	49	30	45½	29	45	32	47	32	46
Year's Av'ge.		47		47		47		47		47

COLDEST DAYS.

1858.	1859.	1860.	1861.	1862.
17 Feb. 11°	10 Jan. 1° b. 0.	1 Jan. 8°	13 Jan. 0°	5 Jan. 10°
24 " 10	11 " 4 "	2 " 7	14 " 10	25 Feb. 17
5 Mar. 10	11 Feb. 18 a. 0.	2 Feb. 5	8 Feb. 4 b. 0.	7 Dec. 14
	28 Dec. 10 "	3 " 8	9 Feb. 4 a. 0.	20 " 10
	29 " 8 "	17 " 12	7 March 15	21 " 7



Valuable Record, for Farmers and Others.

The accompanying diagram shows a simple and very satisfactory plan for keeping a record of matters which are subject to variation—as, for instance: the hight of the thermometer, the rise and fall in price of grain or other products, the amount of yearly produce on the farm, etc. It has long been in use among scientific men, but is so admirably adapted for operations on the farm and elsewhere, that thousands of the readers of the *American Agriculturist* will be interested in examining its working, and in making it useful in their own business matters.

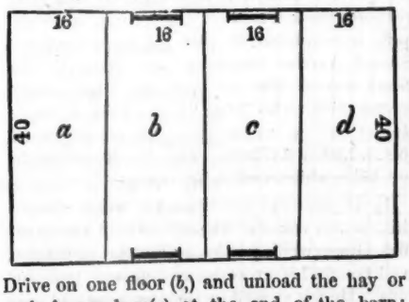
Our illustration was prepared some time since, to exhibit the method as actually used in our office, for noting the changes in the barometer; but in a recent number of the London Gardeners' Chronicle, a similar plan is shown, for exhibiting the increase and decrease of the flow of milk in a number of cows, and that being a matter of very general interest, we will illustrate the working of the record so applied.

The numbers at the *top* of the diagram designate the days of the month, to each of which is assigned one of the spaces made by the *perpendicular* lines. The figures at the sides, 1, 5, 10, etc., stand for quarts of milk, each space between the *horizontal* lines representing one quart. The daily yield of milk by each cow is shown by the irregular lines, running from left to right. Thus: it appears by the above record, that on the 1st day of the month, one cow (*a*) gave 8 quarts, and the other (*b*) 11¾ quarts. On the 2d day there was an increase in each, *a*, yielding 9¼ qts., *b*, 12 qts. The increase continued with *a*, until it reached 14½ qts., on the 8th of the month, when there was a slight decline for a few days, after which the amount rose to over 19 qts., on the 17th day, and then rapidly fell away. Now, if notes were made in the perpendicular spaces under the dates, of the different kinds of feed given, change of pasture, and other circumstances supposed to affect the flow of milk, a glance at the record would determine whether the change were favorable or otherwise. The cases noted above are imaginary ones, but they serve to fully illustrate the method. The horizontal spaces can also denote degrees for the thermometer or barometer, bushels for grain, cents for the price of commodities, or any other denomination required; and the number of spaces can be altered to suit any business or other matter. The perpendicular spaces can also be used to represent as many weeks, months or years as are desired. Where several records, liable to become confused, are marked on one sheet, they can be kept distinct by using different colored pencils or ink, or by making dotted, or broken lines. As remarked above, the changes of the barometer are recorded in this manner at our office, and it perfectly demonstrates the usefulness of the plan, to notice how exactly the rise and fall of the mercury correspond with the variations in the atmosphere. Where the indicating line rises, the accompanying notes read: "Fine weather," where it falls, there is recorded: "Cloudy, rain, snow, or wind," etc. A few years of such records, pertaining to various farming operations, would be invaluable as exhibiting the success or failure of different methods of treatment. They would be like charts, pointing out paths to be followed, and rocks to be avoided. Whatever appeals directly to the eye, produces a stronger impression than any written statement can do. One who, upon consulting his chart, should find his lines continually running down hill, would be strongly incited to a change of his present management.

For the American Agriculturist.

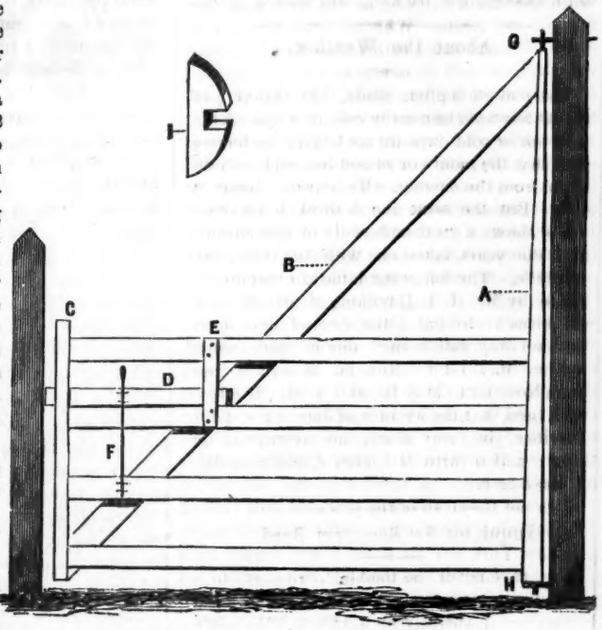
Cheap and Convenient Barns for New Countries.

Where durable timber can be procured, such as locust or cedar, cut posts four feet longer than the hight desired for the barn; frame a tie on the *tops* of each four posts; let the tie project eight inches beyond each outside post, (*i.e.*, let the ties be one foot and 4 inches longer than the width of the barn). On top of the ties cut in a boxing or groove, 1½ to 2 inches deep, for the plate to rest in. Now sink holes in the earth, three or three and-a-half feet deep, bringing the bottoms of the holes all to the same level; which holes are to receive the lower ends of the posts. Raise the bents one by one, tamping the earth firmly around the posts as the holes are filled up; pin the plates to the top of the ties; and finish the roof as for a frame barn. For side covering, take 2x4 inch scantling, and spike them on the posts firmly, with 6 inch spikes, as far apart as is desirable, (say 4 feet), and nail the siding to them. If the two end ties and the two plates are allowed to project two inches over the posts, outside, it will save scantling in those places. For the floor foundation, lay down three or four pieces of hewn timber across the width of the floor-way; on top of these lay a sufficient number of hewn timbers lengthwise of the floorway, and lay the flooring plank across them. A piece of timber framed in the posts just under the plates, and over the floorway, will receive and hold fast the top end of the posts to which the doors are hung, while the lower ends are morticed in the floor foundation. Hang the doors and the barn is finished. Though so little of a carpenter that I do not know the names of the timbers to a barn, I have just erected one, without aid from a carpenter.——In this connection I would suggest a plan for a convenient and economical barn, for a large farm, viz.: 40 by 64 feet, divided into four bays, each 16 ft. wide, by 40 ft. long. Make threshing floors, and hang doors, to the two middle bays (*b*, *c*).



Drive on one floor (*b*,) and unload the hay or grain in one bay (*a*) at the end of the barn: close the doors to that floor, and drive the loads on the other floor (*c*); fill up the other bay (*d*), and the floor first used (*b*), and still there is a threshing floor (*c*) for use. A stable can be made in the bay (*d*) at the end of the barn next the unfilled floor, and by building the same floor a little higher from the ground, a convenient cellar for roots, can be constructed. I have seen thousands of barns, but have never seen any which economize space like one on this plan. Such a barn, built with posts set in the earth, would require 20 posts; which planted 3½ feet deep, with the soil well rammed down, would withstand any wind, without braces; for there would be 20 trees (posts) to be upturned.

Seattle, Washington Territory. ECONOMY.



Farm Gates.

Among all the improvements which have been made in farm conveniences, there is still a lack of a simple, cheap gate; one which will be sufficiently strong to stand constant and rough usage, and yet not so heavy as to sag. Nothing is more annoying than to be obliged to carry half the weight of the gate in the hands, every time it is required to be opened or closed.

Isaac P. Allen, Whiteside county, Ill., sends us a plan of a gate, which he claims is free from the usual objections. It is certainly very simple, and can readily be made by one of slight mechanical skill. The head piece, A, is made of 4 inch scantling. The brace, B, and the bars are mortised into this and secured by pins or bolts. The heel piece, C, is made of two pieces of inch boards, fastened one on each side of the cross bars. The latch D, is a simple bar of hard wood, sliding on the cross bar and between the boards of the tail piece, and kept in place by the strip placed at E. The latch is kept closed by means of a hickory spring F, which is fastened by staples to the latch, and to the gate; the end of this spring projects above the latch and serves as a handle by which to draw it back. To hang the gate, pins of ¾ inch iron are placed in each end of the head piece, and irons G and H, with a hole punched in the end to receive the pins, are fixed in the gate post. These are fastened by an iron wedge driven in by the side, or what would be better, may have a nut fitted so that they may be secured in place. The catch is represented at I; it should be made of hard wood, and be bolted to the post at the proper hight to receive the latch. This will allow the gate to be opened both ways. There are now several weeks in which much can be done in making gates and similar work. They should be made of hard wood and well seasoned, the mortises put together with a tight fit, and every tenon thoroughly pinned or bolted. The slats and brace may be ¾ of an inch thick and 4 inches wide. The posts should be well seasoned, with all the sap-wood cut off and the portion which enters the ground well charred. They should be set at least 3, and better 4 feet in the ground, with the earth well pounded in to hold them firm.

Brush-harrowing Potatoes.

Mr. Jonas Weed, of Fairfield Co., Conn., writes to the *American Agriculturist*, that much time and labor may be saved, and weeds effectually destroyed in potato culture, on dry, light soils, by turning furrows from both sides upon the rows when the potatoes first appear, following immediately with a brush harrow, which he constructs as follows: In a stick of timber about 4 inches square, and 8 or 9 feet in length, he bores 2-inch holes 18 inches apart, and fastens the butt ends of tough saplings, or brush, in these holes. The timber follows the team at right angles, the brush projecting behind it. The draft should be attached to the underside of the timber, so as partially to raise it from the ground and throw its weight upon the brush. The covering of dirt kills the weeds, while the potatoes are not injured by it. Mr. J. further says that an implement made in the same manner, with the exception of substituting a plank, instead of the timber, so arranged as to incline forward, is excellent for preparing for clover, and other fine-seeded crops.

Implement for Cutting Hay.

An unknown correspondent, modestly signing himself "J. C. M.," sends us a neat model of the implement illustrated below, of which he writes: "It has long been in use in England and in some parts of this country, and is so much superior to the common hay-knife that it ought to take its place. It is called the Hay Spade. It is made of steel plate about ¾ of an inch thick, or less, cut in the form here represented, and thinned from the middle to each side until the edges are sharp. When finished it measures about 10x14 inches, more or less, as desired. The socket for the handle is bent slightly forward, to prevent rubbing the back of the hands against the hay when cutting. The handle is of wood, about 2 or 2½ feet long, made wide at the end for the socket, and about the size of a stout fork handle at the upper part, with a piece the same thickness about five inches long, across the top. The handle is fastened in its place by a screw nail from the back of the socket. I would not give mine for a cart load of the common kind, if I could not replace it with another; it saves time, hay, and labor, is cheap, strong, durable. One will last a lifetime if used with care."

SPLITTING WOOD.—S. Parsons, says, the boys engaged in splitting the year's fuel, can make it easier, and lessen the danger of cutting their feet by the following arrangement: Take a large block of hard wood, say two feet or more in diameter, and of convenient length; set it up endwise, and in the middle dig out a hole seven or eight inches in diameter, and about six inches deep. This will hold the sticks upright, and they can be split into several pieces without handling. The hole can be easily made in a very little time with an auger and chisel.

Sorghum Culture.

The importance which is attached to Sorghum, especially at the West, is shown by the holding of two Conventions of those engaged in cultivating the plant, and manufacturing its products. The one held at Rockford, Ill., Dec. 3, was attended by over 150 practical men, whose experience on various points, as elicited in the discussions, will doubtless be of value to the country at large. The subjects proposed for discussion were: 1st. Best seed and its preparation; 2nd. Best soil and its preparation; 3d. Mode of cultivation; 4th. Machinery for working up the cane and preparing its juice. The discussion upon the first topic shows that great difficulty is experienced in procuring good seed, and that this is liable to deteriorate. The following is the report of the committee on *seed*, which was adopted by the convention.

REPORT OF THE COMMITTEE ON SEED.

Your committee, to which was referred the subject of seed, beg leave to report, that in consequence of the great diversity of opinions and experience of different producers, they find it difficult to designate any one variety of cane to be preferred to all others. It appears from accounts given by various members of the convention, that any one of the canes grown in the country, when raised from the pure seed, with proper culture and care, produces good results. In the selection of seed, therefore, special regard should be had to the question of its purity or freedom from amalgamation with other plants which tend to its deterioration. The production from the yellow Imphee, or African cane, has more frequently resulted in crystallization, than any other. This variety is also desirable on account of its habit of early maturing. Of the different kinds of Chinese cane known in this country, the committee infer from all the information before them, that neither the smallest, earliest varieties, nor yet the largest and later sorts, but a medium between these two extremes—the committee know not by what name to designate it—is most desirable for cultivation. As a means of success in the business, the committee urge careful observation on the part of all growers, and recommend the selection of such crops as the experience of producers has proved most profitable, always guarding with the most scrupulous care against every appearance of mixture with all and any of the plants, with which the cane will hybridize.

The committee would also recommend the importation of seed from time to time, from localities where the climate is more congenial to the perfection of the cane, peradventure the deterioration in its quality, sometimes noticeable, may thereby be obviated. All of which is respectfully submitted.

C. A. HUNTINGTON, }
E. H. SEWARD, } Committee.

Mr. Martfeldt offered the following resolution:

Seeing there are so many names given to the different kinds of cane, according to color of seed, or any other peculiarity, in order to secure a more uniform designation, I offer the following:

Resolved, That in the estimation of this Convention there are only three kinds of cane, viz.: Chinese Sugar Cane, having black seeds, growing in prongs from 2 to 7 inches long; the second or tufted variety to be known as African; the third, lately introduced, to be known as the Otaheitan, having long heads, 7 to 12 inches long, and 1 to 2 inches thick.

The uncertainty with regard to seed appears to be one of the greatest difficulties of the cultivator, and it is doubtful if sending, as some propose, to more southern localities, will permanently better the matter. What is needed, is a variety suited to a northern latitude, which will maintain itself year after year. The Sorghum is, like the Indian corn, liable to great variation, and a permanent variety, or race, can only be established by careful selection and cultivation. The fact, that one cultivator raised twelve varieties from one kind of seed, shows the want of stability in the varieties. There is no doubt that by cultivating for the seed alone, and carefully rejecting that from inferior plants, a variety may be established, which will be superior to any now in cultivation. There is needed careful observation as to what relation, if any, the saccharine quality of the cane bears to the color and marking of the seed, and the form of the heads. Whoever will conduct a series of experiments with a view to improving the Sorghum, will do much to remove the uncertainty attending its culture. The opinion of the members of the convention upon the preparation of the seed, was divided, some preferring to plant it dry, and others soaking and sprouting previous to sowing. Mr. Pardee found it advantageous, to soak the seed 24 to 30 hours in a solution of "chloride of lime and vitriol" (proportions not stated,) he then puts it in bags, and covers in warm ground, until it sprouts.

With regard to soil, nothing especially new was brought forward, the prevailing opinion was that any soil being suitable for Indian corn, would do for Sorghum. Manuring, and deep plowing in the Fall, were generally advocated, and a number of speakers gave their experience in favor of ridging the ground, by throwing two furrows together, and planting on the ridges.

Inquiries for Sorghum Seed.

We are sorry to be unable to respond to a multitude of inquiries as to where pure seed can be obtained in quantity for next year. We made diligent efforts to get a lot from France for distribution last Spring, but found that there was the same deterioration there as here, owing to similar carelessness in keeping it free from hybridization. Learning that Messrs. Vilmorin, Andrieux & Co. had sent to China for new seed, we called upon them while in Paris last Summer, to try and secure some; but they informed us that they would probably be able to procure only a small quantity, and that they should most likely propagate all they did get, so as to obtain a supply for the season of 1864. They kindly promised, however, that if they could possibly spare even a small quantity, they would send it to us—but held out little encouragement. We shall be glad for any reliable information as to where pure seed may be obtained, as there is now a great call for it.

The publisher of the *Agriculturist* feels no little gratification at the result of his efforts a few years ago, when he scattered freely over the country tens of thousands of parcels of sorghum seed. Though we charged nothing for the seed except the postage, and advised a trial of but a small quantity at first, yet not a few cotemporaries cried out "humbug." This same seed laid the foundation for the immense crop of sweetening grown at the West the past year. Probably three-fourths *or more* of all the sorghum grown in our country as yet, has come from the seed originally sent out from this office.

GOOD FOR THE NEW-HAMPSHIRE GIRLS.—In Rockingham County, N. H., an aged farmer has sent three sons to the war, leaving himself short of help. Fourteen of the young women of that place recently collected together and husked a hundred bushels of corn for him. Their "lily hands" may have been roughened by the work, but the good hearts going with such hands, will be a treasure to the fortunate winners, worth far more than delicate fingers.

Blinks from a Lantern....XXXII.

DIOGENES VISITS RICHARD BULLION ESQ.

"It is capital that makes good farming," said Mr. Bullion, as he bowed me into his parlor, and pointed me to such a seat of silky, downy softness, as Diogenes rarely sees in all his visits. "With capital," continued Bullion, in that self-satisfied air which he assumes when he remembers that he is worth a hundred and fifty thousand dollars, "a man can make the land do pretty much as he pleases. He has only to tickle the soil with a hoe, to make it laugh with such a harvest as the barns can hardly hold."

Bullion has never seen better days, has never enjoyed himself so entirely as he now does. He has run his race in the city, has got money enough to satisfy a man of his reasonable tastes, and has retired to the country to enjoy the evening of his days—a pretty long evening it may be, for he is now but just turned of fifty. He was a farmer's boy, but precious little good did his birthplace do him, for he left it for a country store at fourteen, strongly bent on merchandise and a fortune. Though he never acquired any skill in husbandry beyond learning to milk, churn, pick stones, and ride on horseback, he learned to love country life, and always cherished the dream of returning to the paternal acres to fix up the old homestead, to keep fat cattle, sheep, and pigs, to drive a good horse, and take premiums at the County and State Agricultural Fairs. It is not improbable that he might have made a farmer, if his father had been a good one. But he managed every thing upon "the penny wise and pound foolish" principle, worked hard himself, and never had half help enough to make his farming profitable. Every thing was done on a small, mean scale, and young Bullion left home early with the parental consent, determined that when he got ready to farm it, he would not be cramped. He succeeded in the city, so far as the making of money was concerned, but never took that social position which his wife coveted for her family. She longed to be invited to Mrs. Gingerwell's parties, in the Fifth Avenue, but never quite accomplished it. She got invited into the Second Avenue frequently, and lived in the Ninth herself. For her part, she could never see why folks who lived in the Fifth Avenue, should feel so much above people who lived in still higher Avenues. She left the city without being able to solve the mystery.

But Bullion did not share his wife's sympathies in this respect. He did not care a snap for Mrs. Gingerwell's parties, so long as old Gingerwell bought his groceries of him and paid his bills. He felt as well in the purchase and sale of tea, coffee, wines, and sugars, as Mrs. Gingerwell did in the use of them, and the aristocratic notions of his customers never troubled him. Richard Bullion was not going to bother his head about such women's notions. Not he!

Well, Richard had realized his dream, at least in part, had got back to the old homestead, had reared a handsome monument to his parents in

the grave-yard, and another to himself on the site of the old house, the first done in marble, and the other in Granite. This granite house is a good notion, and I wonder people who have the means, do not oftener use it for building. It is a classic material, and suits the esthetic taste. It is very durable if properly put up, and will last a thousand years as well as wood will a hundred. We are having now, in the older parts of the country, the third generation of houses, and the most of those now upon the stage will not long survive their hundred years. Is it not about time that we began to have some permanent houses in this country? The material is abundant in most parts of the land, either granite or limestone, and is easily wrought. In some localities stone would be the cheapest, and when once erected, it is a monument to the builder for a thousand years at least. Some are troubled to find traces of their ancestors who have died only two hundred years back. The grave stones have crumbled, and no one can tell what was carved upon them. But granite will not crumble so readily. It makes a very warm house in Winter, and is much cooler than wood in Summer. Bullion admires his house quite as much as his farm, though it was the farm more particularly that I was invited to visit.

"This is the best house in the county," said Bullion, after he was seated. "It cost me the sum of eleven thousand one hundred and twenty three dollars thirteen cents, all complete. It has thirty rooms in it, and I can entertain all my friends that are disposed to visit me. The carpets cost me five hundred dollars, and the mirrors nearly as much more." The house did not need the self complacent owner's eulogy, for it was very richly furnished, though the furniture was not very tastefully arranged, or selected so as to match. The pictures were tolerable, though the gilt frames cost more than the paintings. They did not hang in a good light; but they were upon the parlor walls, and were the evidences of Mrs. Bullion's social position, which was the main thing she cared for. I do not suppose she ever looked at them five minutes in her life. She had a good deal of sense but not much sentiment.

Richard Bullion Esq., was proud of his farming—and it was this I was particularly expected to admire. "I have raised this year," said he, "200 tons of hay, 1000 bushels of corn, made three tons of pork, five tons of cheese, and have taken premiums on the best swine, and the best cows in the county. The sales from my farm foot up about $3,300, besides all that has been consumed on the farm."

"Well," said I, "let us look a little at this premium farming. How much corn did you get off of your best acre?"

"Just ninety bushels and three pecks, for I measured it because I entered it for a premium."

"And how much did the corn cost you?"

"Well I can tell pretty near," said Bullion, "I put on plump fifty cords of manure for I meant to get the premium any way, and I dropped about ten dollars' worth of superphosphate in the hill. The manure, I suppose, was worth two dollars on the field. I calculate that the corn fodder was just about a fair offset for the labor of plowing and tilling, and gathering. Well, the corn must have cost about $1.25 a bushel."

"And what can you buy good corn for in the market?" I asked.

"Corn ranged from 60 to 80 cents last year."

"And do you call that good farming, to raise corn at a cost of forty cents a bushel above what it would bring at the extreme market price?"

That was manifestly putting the matter in a new light, and Bullion scratched his head. I saw abundant evidence in my further conversation with him, that every thing was managed upon the principle of great crops at whatever cost. Now Bullion will unquestionably make a grand farm out of the old homestead, but it will not be done economically. Land in good heart can be so managed as to pay for its own improvement. A farm is a *machine* for making money, that does not wear out if it be skillfully worked. Corn ought to be produced at the market price, pay the raiser a profit, and at the same time leave the soil in better condition. It is not good husbandry to lay out four thousand dollars to secure crops that will sell for only thirty-five hundred. Farmers, in many instances, want more capital, but they want more skill quite as much. Money without skill can raise big crops, build big barns, and fine houses, but money alone does not make good farmers.

Seeds—How Long will they keep Good.

There is no general answer to the question, as seeds of different kinds, collected and preserved with equal care, will vary in the length of time they retain their powers of germination. Some seem to be good after an indefinite period, while others are not to be depended upon after they are a year old. The seeds of some trees will not germinate at all if once allowed to dry, and others will only appear the second year after planting. Works upon horticulture are generally deficient in information upon the raising of seeds and the length of time they may be safely kept. While it is safest to keep them at a uniform temperature just above freezing, there are many which will bear great extremes of heat and cold. Plants have been raised from seeds taken from raspberry jam which must have been exposed to a heat of 220 degrees. When buried in the earth, below the reach of those influences which induce germination, there seems to be no limit to the vitality of some seeds.—Among plants commonly cultivated, the seeds of carrots, onions, parsneps, and salsafy, are not to be relied upon when over a year old. Beets, spinach, lettuce, celery and parsley, will keep 2 or 3 years. Radishes, cabbages and turnips, 4 or 5 years. Melons and cucumbers may be kept for 10 or more years; old seeds of these are preferred by some gardeners, as the vines are said to be more prolific and less luxuriant than those from fresh ones. Good seeds being heavier than water will generally sink in it, but this is not applicable to those with a hairy or spongy seed-coat; such seeds will float even when sound. The only sure test is to try to sprout them in boxes or pots of earth. If they do not germinate there, they should be rejected.

For the American Agriculturist.

Good Winter Butter from Roots.

Every person who has an acre of good land, and good cows, may have butter in January and February, equal, or even superior, to that which is made in September. Though not a farmer, the writer subscribed for the *Agriculturist* in 1860. An article was published, recommending rutabaga or Swedish turnips as food for cows. In the Spring of 1861, seed was obtained, and planted in rows 3 feet apart, and 5 inches distant in the rows. The ground was not the best for roots, yet I obtained from 4 rows, each 100 feet long, roots enough to feed two cows, once a day, five weeks. The cows had commenced to decrease in the quantity and quality of the milk, after having been taken from the grass, and before feeding the roots, but in a few days there was a marked increase in both respects. The butter was equal in quality to what was made in June, and in quantity to that made in October. It was worth 3 or 4 cents per pound more than the white, oily *substitute*, generally found on farmers' tables at this season of the year, in places where neither roots nor grain are used. Those who have even small plots, would do well to raise roots next year. Begin in time; select good soil, manure during the Winter, and have the ground ready by planting time. The profit on the few bushels raised this year, far exceeds the cost of the paper which led me to make the experiment. K.

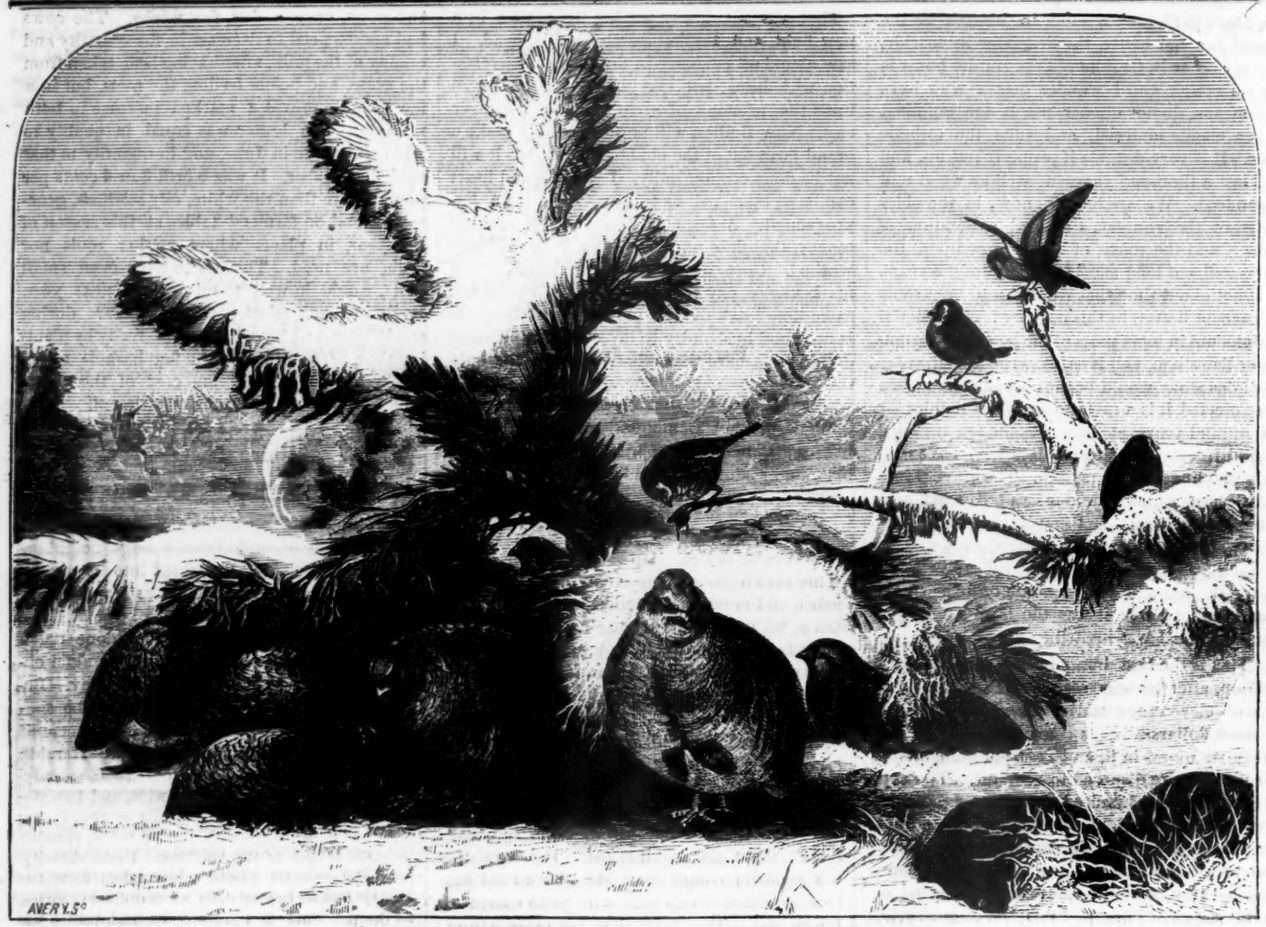
Union Cheeses.

A "Union Cheese House" has been for some time in successful operation at Oriskany, Oneida Co., N. Y. The milk from a large neighborhood is collected and converted into cheese by the aid of the best machinery and appliances. The manufacture on an extensive scale by those who make it their sole business is done much more cheaply, and a more uniform product obtained than is possible in the small way. Believing that a similar enterprise would be successful in other localities, we quote an account of this one from the Utica Morning Herald:

"The main building is one hundred and seventy-six feet long by about forty feet wide, and two stories high. This is used principally as the drying room, and is furnished with framed tables running the entire length of the building. Upon these tables the cheeses are placed when taken from the "hoop," and are turned daily, as in ordinary dairies. Besides this, there is a press room, and vat room, some twenty feet square, each. There are six vats, each holding about 500 gallons, in which the curd is prepared for the hoops. There are nine "pressure hoops" for 300 lb. cheeses; one for cheeses of 700 to 800 lbs. each; and one for 1,000 pounders. The concern receives and manufactures the milk of nine hundred cows, the most distant being four miles from the factory. As the milk is brought in it is carefully weighed and the owner credited with the number of pounds received.—One cent per pound is charged each customer for his cheese making. In addition to this, the parties furnishing the milk, pay a ratable proportion of the expense of salt, cloth for bandages, and for boxes. The whey is an important consideration. This belongs to the company; it fattens two hundred hogs. Shoats are purchased by the company, when weighing, say one hundred lbs. each, and put into the yards attached to the establishment, in the Spring. They are turned off in early November, weighing three hundred pounds and over.

Hogs are "boarded" (fed) for 12½ cts. per week each, for those who do not desire to have them "live with the family." The swine have a large field in which to take their morning and evening walks, and pursue their amusement of "rooting."

Everything is conducted in the neatest manner, and it does one good to witness the difference between the order and cleanliness of this model institution, and the suspicious and slatternly surroundings of some home dairies. We counted seven cheeses upon the table that weighed *ten hundred and forty pounds each!* and ten, that weighed seven hundred and thirty pounds each. The average weight of the cheeses is two hundred and seventy-five pounds each.—The whole product of the manufactory was sold in November, and brought fourteen cents per pound, except the seven large ones which brought seventeen cents per pound, realizing the sum of forty thousand dollars or over. This sum paid a very handsome dividend to those who patronized the establishment.



"THE COVEY."—FROM A PAINTING BY J. WOLF.

Engraved for the American Agriculturist.

The birds represented in the above beautiful engraving are among the most popular with the sportsman and the epicure. It is counted no small feat to bag a dozen brace of grouse in a day's hunting, especially in settled portions of the country, and enthusiastic gunners frequently travel a hundred miles or more to find the favorite haunts of this game. There are several species of grouse in America, the most common of which are: 1st. Ruffed grouse (*Tetrao umbellus*), called pheasant at the West, and partridge at the East; 2nd. the Pinnated grouse (*Tetrao cupido*), or "prairie hen or chicken." Both of these are sent to city markets in large quantities during the Fall and Winter, and almost always command a ready sale at from 75 cents to $1 per pair.

The Ruffed grouse is found in every State and Territory of the Union, but is most abundant in the portions North of Maryland. These birds delight in craggy mountain sides, and rocky borders of small streams, among thick growths of evergreens, or tangled underbrush, but will breed in other localities, even among canebrakes. They do not pair permanently, their habits in this respect being like those of the common fowl. In Spring the male attracts the female by the peculiar and well known drumming sound made by beating his wings against his sides with increasing rapidity, until it sounds like a continued roll of distant thunder. After pairing time, the males wander together, apart from the females, until the approach of Winter, when young and old of both sexes congregate in flocks or coveys. The female makes her nest among dried leaves beside a fallen tree, or in the shelter of a low bush. She lays from 5 to 12 eggs of a uniform dull yellowish color. The young follow the mother the moment they leave the egg, and are able to fly several yards when a week old. They are naturally the shyest of birds, and at the slightest cluck of danger, the little ones will hide so as to almost defy detection. They feed upon seeds and berries of all kinds, and when these are scarce, they pick the buds and leaves of several kinds of evergreens. They are very fond of grapes, strawberries and dewberries. They remain near their place of birth the year round, unless compelled to emigrate by scarcity of food. The peculiar whirr made in the flight of grouse only occurs when they are disturbed by the approach of some foe; at other times they pass through the air on the wing as quietly as other birds.

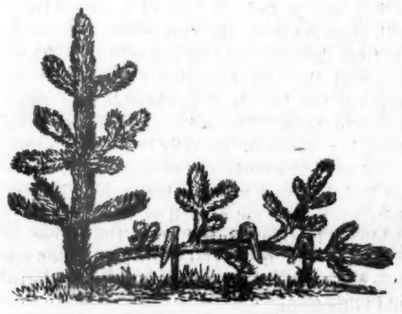
The Pinnated grouse, "Prairie hens or chickens," which are now confined almost wholly to the West, were formerly found throughout the whole North; and a few yet remain in some portions of New-Jersey, on the "plains" of Long-Island, at Martha's Vineyard, Elizabeth Island, and Mt. Desert Island in Maine. Years ago they were so abundant in Kentucky, as to be considered a nuisance, not worth shooting, except to prevent their depredations upon orchards and grain; but civilization has driven them westward with the Indian, and since becoming scarce, they are highly esteemed for the table. Their habits bear a general resemblance to those of the Ruffed grouse, except that they live more in the open country, sheltered by grass. They congregate in flocks in Winter, and in Spring separate into parties of fifty or more. When the love season commences, the males of a flock all resort, early in the morning, to some particular locality known as the "scratching ground," where they engage in the most desperate battles, a dozen or more at a time often taking part in the general conflict. The victors fly away to enjoy the caresses of their mistresses, the vanquished to console themselves as best they may. During this season the males, instead of drumming, utter a peculiar note, called "tooting." It is made by drawing air into a bladder-like receptacle in the neck, resembling a small orange, and emitting it forcibly at short intervals. The noise is like the beating of a muffled drum, and can be heard at a distance of nearly a mile. Unlike the first mentioned species, the Pinnated grouse are easily domesticated, and raised with as little difficulty as common fowls. Grouse not being insectiverous birds, may be considered fair game; but the indiscriminate slaughter of them at all seasons of the year by roaming gunners, can not be too severely reprehended. They are fit for the table from September to the middle of February or a little later, depending on the season, after which they should be left unmolested to propagate their species. Game laws for their protection exist in some of the States, but from neglect to enforce the penalties for violation, these birds are yearly becoming more scarce.

ECONOMIZING TIME WITH HENS.—C. N. Bement writes to the *American Agriculturist:* "All who are familiar with rearing chickens, know that very few hens will allow newly hatched chickens to be committed to their care. This is probably because the mother hen has become acquainted with her own chickens, from color,

marks, etc., and considers the new comers as intruders, which she too frequently punishes with death. To avoid this, confine the first hen that hatches, in a coop with her chickens, until another brood is hatched; then substitute the second hen for the first, relieving the charge of the former. When a third hen hatches, put her in the place of the second, with all three broods; if the aggregate number does not exceed thirty, a full sized hen will take good care of the whole.

The Measure Worm.

The habits of this pest, which, besides annoying those who travel the streets of our cities, threatens to destroy many of our ornamental trees, have been specially studied by Messrs. H. A. Graef, and Ed. Wiete. They have published, with the sanction of a Committee of the Brooklyn Hort. Society, a pamphlet containing a history of the insect, and a plan for its destruction. Among the trees usually planted in streets, the following are most frequented by the worm—they are named in the order of their liability to attack: *European Linden*, *Silver Leaved Maple*, *Sugar Maple*, *English Elm*, *Horse Chestnut*, *Weeping Willow*, *Silver Leaved Poplar*, *English Ash*, and *Honey Locust*. The trees found to be free from young insects, and only visited by the old ones when other food becomes scarce, are: *Ailanthus*, *Catalpa*, *Cypress*, *European Larch*, *Tulip Tree*, *Paper Mulberry*, *Paulownia*, *Buttonwood*, and *Locust*. The authors propose to save the trees of the infested district in Brooklyn, by a systematic onslaught upon the insect in its various stages, beginning with the eggs, which are deposited on the trunks and branches, and continuing it upon the worm in its various stages of growth. They propose to arrest the worm in its progress from the egg to the twigs by means of tar rings, to syringe with tobacco water to destroy the young ones, and to knock off the old ones by jarring the limbs by means of apparatus for the purpose. Wrens are to be encouraged to build their nests in the trees and lend their aid to the work of extermination. There is no doubt that killing the worm will be sure to save the trees, but whether their plan can be systematically put in operation over large districts will depend upon the public spirit of the inhabitants and their love for shade trees.



To Get Leaders for Evergreens.

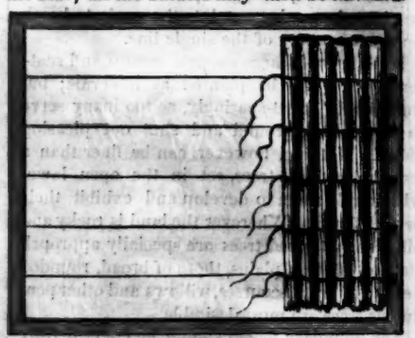
It frequently happens that evergreens, of the rare and expensive kinds, are propagated from cuttings or layers from the side-branches of the parent tree. The young plants so raised, are quite slow to form central leading shoots. We have seen such young trees spreading and sprawling about upon the ground for several years, as if they did not know how to rise, having no central spire around which the other branches clustered, and not worthy the name of tree. This perverse habit can be broken up, and the straggling bush can be forced to throw up a leader. To do this, after the plant has made a vigorous root-growth, peg down all the branches to the ground, as illustrated above. This will so check the flow of sap through them, that a new and vigorous shoot will start up from the base, which will grow erect, and form the nucleus for a new and better tree. After this central shoot has become well established, cut off the old stragglers. Keep the soil well enriched and well tilled for several years.

Farming for Old Age.

Every one with his eyes open has seen many men, farmers and others, make great mistakes in "retiring" early from business. After one has spent the best of his days in active employment, it is quite unnatural for him to suspend all work, fold his hands, and sit down idle. The fancied pleasure flies from him; he was never so miserable before. How much better is it to retire slowly, to give up labor and care by degrees, and never to give them up entirely. Activity, bodily and mental, is necessary to keep one's faculties bright and in a healthy condition. To the farmer especially, we would say, prepare for old age by degrees. If your farm is large, lay off a portion of it for fruit culture. Plant an orchard of the choicest varieties of apples, pears, plums, cherries, and peaches. If a good proportion of the apples are Fall and Winter sorts, they will always be marketable, and will yield a handsome income with only little labor. Plant also a vineyard. The care of it will furnish pleasant occupation for an old gentleman, and the grapes and wine yield considerable income. This point deserves more consideration than it commonly receives. The profits of a farm are never too large, even after the hard labor of one's prime applied to it. But one can not expect to plow and hoe, and hoe and plow forever. Why, then, should we not put our farms into such a condition that when our limbs become stiffened by age, our lands will yield us nearly the same income with less work? That a large and well selected fruit orchard will do this, no intelligent person will deny. A fruit-tree when young costs but a trifle, it occupies but little space, does not exclude hoed crops or grass, and when grown to maturity, yields an annual income of from $15 to $40. And besides the orchard and vineyard, let the old man have his garden. In this way, he will have enough to do, and yet not be oppressed with care and labor. Committing the larger part of the farm to his grown-up sons, he can give them the benefit of his experience, while both parties will rejoice in their prosperity and their independence.

Straw Mats—How to Make Them.

Now is the time to make a stock of straw mats, an article useful in every garden. They serve to cover half hardy shrubs during the Winter, are handy to throw over tender plants to shield them from frosts, and where there are hot-beds, they are almost indispensable, to protect them during the cold nights of Spring. They may be made of any size, but it will be found most convenient to have them of a size to cover a single sash. Make a rough frame one foot larger each way than the required mat; lengthwise of this, stretch pieces of large, strong twine, to serve as the *warp*, which may be tied to the frame itself or fastened to pegs placed in it for the purpose. The pieces of twine should be 8 or 10 inches apart, and the distance between the two outer ones about 6 inches less than the width of the mat. A piece of smaller twine 3 or 4 feet long is to be tied firmly to each thread of warp, close to one end of the frame; these are to serve as lacers or binders to hold the straw in place. The frame being laid flat at a convenient hight upon horses or in some other way, the workman stands inside of it facing the end where the binders are attached, he takes a small handful of straw and lays it with the butt ends projecting about 3 inches beyond one of the outer pieces of warp, and secures it by passing the second binder over it and tying this by means of a half hitch to the warp. Another handful is similarly placed on the opposite side, the small or grain ends of the straw will then overlap one another in the middle of the mat; all the binders may then be fastened.



Layer after layer of straw is put on in this way, the operator working backwards, until the mat is of the desired length. The binders may be lengthened as required, by knotting other strings to them. Care is required to maintain a uniform thickness by putting on the straw in equal quantities, and compressing each layer to the same degree by the binders. When finished, the mat is to be cut from the frame, and the ends securely fastened. The sides are trimmed with a sharp knife, using a straight edged board as a ruler. Mats of this kind, if properly cared for, will last several years. They should, of course, be thoroughly dried before storing away. The engraving given above shows how the successive portions of straw are bound to the warp.

Public Parks.

As some of our readers doubtless have occasion, in their several localities, to superintend the planting and arrangement of public grounds, we venture to suggest a few ideas on the subject.

Large public grounds should be provided with roads for carriage-drives and for horseback riding. These should be wide enough to admit of turning round and turning out easily, and they should be hard and smooth. There should be one main drive, laid out near the boundaries, though not running continuously on the same line, nor in sight of the fences. From this main drive, cross-roads may occasionally diverge, to allow of shorter and more varied rides to such as may wish them. But these subordinate roads should be narrower, and they should be made as inconspicuous as possible. Walks may also be laid out by the side of the main road, for the use of pedestrians. A more desirable place for walks, however, will be found in the interior portions of the ground, away from the dust and exposure of the traveled road. These should be arranged so as to command as great a variety of scenery as possible; now ascending eminences

to get views of distant hills, or spreading country, or sheet of water; then descending into quiet valleys, rolling over grassy lawns, skating ponds or streams, or winding among rocky dells. Whoever wishes to examine some of the finest examples of road and walk making, should visit the Central Park in this city, especially the "Ramble," and he will learn more in a few hours than we can teach him in many pages.

The planting of such a park will require less study than a smaller piece of landscape-gardening. A leading object will be to secure shade. Of course, then, the borders of the drives and paths should be fringed with trees. Yet they should not be set in continuous lines and close together, thus excluding free views of the grounds. In addition to this, wherever fine prospects can be had of distant scenery, the outlook should be left open and unobstructed. Here and there, also, groups and masses should be planted, running out into the park, to break up the monotony of the single line.

If the space is large enough, groups and scattered trees may be planted at intervals; but they should be set sparingly, as too many serve to contract the ground and shut out pleasing views. Nothing, however, can be finer than a few choice single trees, set in the open lawn, with ample room to develop and exhibit their perfect forms. Wherever the land is rocky and hilly, spiry-topped trees are specially appropriate; on fat, rich plains, those of broad, rounded heads; by water-courses, willows and other pendulous trees are most desirable.

The boundary fences should be concealed by hedges and low trees. Mr. Loudon laid it down as a general rule that, "whatever the hight of a tree or shrub may be, provided it be greater than that of the human eye from the ground, it ought to be placed at such a distance from the walk or road, as that the eye may see the top of it at an angle of from 30° to 40°. A tree that grows forty feet high, ought to be placed about fifty feet from the walk." Here he is speaking of trees set in parks for observation rather than for mere shade. Another excellent rule was this: "Every tree or shrub, however low, ought to be placed at such a distance from the walk, *that its branches, when fully grown, shall not reach nearer to it than from one to two feet.*" A rule that ought to be printed in letters of gold, and hung daily before every tree-planter!

We need hardly add that the soil in which the trees are to be set, should be properly enriched, subsoiled, and drained. They will then make a vigorous growth from the outset. That the ground around the trees should be worked over annually with hoe and spade, and kept free from weeds for several years, is another obvious fact. For the first year or two, the roots should be mulched with coarse litter.

A park is not complete without convenient seats. These should be made of the plainest materials, solid and not likely to get out of repair. The appropriate places for them are, both under the shade for Summer use, and in the sunshine for Spring and Fall; in quiet, retired nooks, and on high points commanding views of surrounding scenery. Set anywhere and everywhere, they will hardly come amiss.

THE NORWAY MAPLE differs considerably from the common rock-maple. Its bark is smoother; the buds in Winter are larger and blunter; the leaves are larger, darker, and there are more of them. They are not white on the under side. The flowers in Spring are yellowish. The tree is a rapid grower, and easily adapts itself to all soils. In Europe, the wood is highly valued for cabinet work; it resembles, somewhat, our birds' eye maple. Plant it.

Seedling Fruit Trees.

It is singular that the majority of our most valued fruits are chance seedlings, originating without the intervention or care of the cultivator. This is especially true with pears and apples, which are so long in coming into bearing that few have the patience to make the trial. Peaches, apricots, and other stone fruits, which fruit comparatively early from the seed, are often multiplied in this way. The raising of seedling pears has received a new interest from the labors of M. Gregoire Nelis, in France, and of the veteran pomologist Thomas Rivers, in England. The former has devoted 32 years to his experiments in raising pears from the seed, and has in that time raised 150 varieties worth perpetuating, and of course, at the same time, thousands which were rejected as unfit for introduction. M. Gregoire Nelis' method of hastening the fruiting of the seed, is to transplant annually; this gives them a compact growth and promotes the formation of fruit buds. In this way, fruit is obtained in 6 or 8 years from the seed. The experience of Thomas Rivers is given in the Gardeners' Chronicle, in an article which is so interesting that it is a matter of regret that its length prevents us from re-printing it. He cultivates the pear seedlings in pots in the orchard-house, keeping them in 10 inch pots, and root-pruning and re-potting every season. Treated in this way, the trees may be expected to come in bearing in six years. A general tendency is found in seedlings from late pears, to mature much earlier than the parent. His results with the progeny of well known varieties, is full of interest to the pomologist, but would not be so to the mass of our readers. Peaches and nectarines grown in pots will produce fruit in three years from the seeds, and those raised from late kinds show, like the pears, a tendency to produce early varieties. In the course of Mr. Rivers' experiments he found that nectarines were produced from peach stones, and that the stone of the nectarine would sometimes produce a peach tree, thus confirming the fact, which has been doubted by some, that the two fruits are only varieties of the same species.

The improvement of our various fruits by seedlings from good sorts may well claim the attention of those who have time and means to devote to it, yet there are still "native fruits" in many localities which should be brought into notice. Several of these have been presented at the Fruit Grower's meetings held each Thursday at the office of the *Agriculturist*, and we invite those who have seedling fruits, possessing desirable qualities, to bring or send them to these meetings for examination of their merits.

Trees for Nurses.

A good deal is said in books and papers in favor of setting out a surplus number of trees in a plantation, (afterwards to be removed) for the sake of sheltering those which are to remain permanently. They are planted, also, partly for the sake of giving immediate effect.

But experience is beginning to testify against the practice. It is found that when the ground is so thickly filled up with trees, the soil becomes quickly exhausted, and the permanent trees make only a slow growth. Moreover the nurses overgrow and shade the permanent trees so as to injure their shape. The lower branches make a much feebler growth than they would if exposed to abundance of light and air, and the higher branches run up in a spindling manner. Evergreens especially suffer when crowded by nurses. Their base branches, which it is so important to preserve, soon die out. And yet, if caution be used, such trees may be sometimes employed. For instance, they may be set on the most windy and exposed side or sides of a favorite tree, if they are planted at a considerable distance, and if they are removed after the first or second year. The danger is that they will be left standing several years, until they have injured the tree beyond recovery.

Managing Trees in Windy Places.

Various plans have been tried to keep newly set trees erect in bleak places, and to preserve their branches from being blown and whipped out of shape. Stakes of several kinds are used. Some are set close to the trunk and bound to it by wisps of straw or bands of leather; but these are soon displaced, or the tree gets badly chafed. Then, a stake is often set a foot or more from the tree, and the two are fastened together by cords of some kind; yet here, too, the cords may be broken before the planter is aware of it.

We have tried a plan lately, which has some merits. It dispenses with stakes altogether. After the tree is planted, four or five stout pegs are driven into the ground, in a circle around the tree, and about under the ends of the branches. Flat leather bands, or stout pieces of listing are tied to the branches on opposite sides of the tree. Strong cords are then drawn from these to the pegs and tied. This keeps the tree from swaying in any direction. On the most windy side, double the number of cords are used, to preserve the branches in good shape. To this we have added, for weeping trees, light weights suspended from limbs which, on account of the wind, did not take the pendulous habit that was desirable.

For the American Agriculturist.

Northern Spy Apple.

I think "Pomologist" has extolled this apple too highly on page 367, December *Agriculturist*. My experience with it is not favorable. In the Spring of 1850 I set out four young trees of this variety, and grafted the tops of three old trees with cions cut from the young trees. None of the trees showed even a bloom until 1860. They bore well the two following years, but there were not two barrels of marketable fruit from the seven trees. The soil on which the trees stand, is a sandy or gravelly loam, which produced over fifty bushels of corn per acre. I do not find the Spy keeps any better than Esopus Spitzenberg, and not as well as R. I. Greening, Baldwin, Roxbury Russet, etc. The flavor is good, and the fruit retains its freshness for a long time, which is about the only thing I can find in its favor.

In the Spring of 1855 I grafted an old tree with Baldwins, and had two barrels of fruit from it the third year, seven barrels the fifth year, and six the seventh year, making fifteen barrels of saleable apples in seven years from grafting.

A. G. PERCY.

Wayne Co., N. Y.

REMARKS.—The Northern Spy is one of our most variable apples, though nearly always of good flavor. It is not suited to a wide locality, but in many places, on rich soil, it does remark-

ably well. It is certainly late in coming into bearing, and it does not show all its good qualities at the first fruiting. It continues to improve with age. In some localities, however, and on poor soil, it often proves quite refractory, and on this account it has not received the universal commendation, which an apple of such fine appearance, and agreeable, sprightly flavor would appear to deserve.

Experience with Peach Trees.

To the Editor of the American Agriculturist.

Ten years ago I bought and transplanted two hundred peach trees, which netted me two years ago, $200. The soil was too rich, and they are now nearly all dead. Four years ago, I bought an orchard of 900 peach trees, and 300 apple trees set between them. These trees are now 10 years transplanted, and last September they netted me $500. They were set on thinner soil than the first lot, except in one corner where they have all died. I am satisfied that peaches require the same kind of soil that potatoes do, to prevent their rotting—thin, or poor upland. Cultivation is necessary to fruit-bearing. If the orchard be seeded, you need not expect many peaches. The kinds I like best, are: old Mixon, Crawford's Early, Crawford's Late, Melocoton, Smock, and Morris White.

The peach borer is an inveterate enemy, but the "yellows" is the great destroyer. Perhaps this disease is superinduced by rich soil and common farm yard manure. I think mineral manures only are necessary, and little of them if the land is properly cultivated by raising potatoes, or other low crops—or without crops.

Fairfield Co., Conn. G. W. B.

Fruit Growers Meetings.

Excepting during the holidays, these meetings have been kept up regularly, and are increasingly interesting. They are held at 1 o'clock P. M. each Thursday, and all interested in fruits and kindred subjects, are invited to attend. A standing committee consisting of Chas. Downing, S. B. Parsons, W. S. Carpenter, A. S. Fuller, and Dr. I. P. Trimble, has been appointed for naming new fruits, identifying old sorts, and investigating whatever is about being sent out with high sounding names and large claims upon the credulity of the community. This will guard against imposition and fraud. After the adoption of a list of 20 varieties of pears recommended for planting, as published on page 17, January *Agriculturist*, a committee was appointed to bring forward lists of the 6 best grapes for out-door cultivation. Several discussions have been had over the grape question, and sundry lists have been presented, but no selection has yet been adopted: the decision will soon be made and published in ample season for Spring planting. A similar committee to bring forward apple lists has also been appointed, and will agree upon a report in a week or two. The list will probably be adopted in season for publication in our next number.

A great many winter pears have been sent in from time to time, among which the Vicar of Winkfield is most abundant. When well grown and ripened with care, they are really good; some members expect to have them until February 1st. The Lawrence, however, is pronounced to be among Winter pears what the Seckel is among the Autumn varieties. It was advised to plant it on the pear stock. The specimens of the Glout Morceau, frequently brought before the meeting, proved very fine. Though this variety is proverbially slow in coming into bearing, one member reported a barrel of fruit picked from a standard tree planted nine years ago.

W. S. Carpenter questioned whether the so-called dwarf trees retain any of the quince roots after being planted a few years. Nurserymen universally advised to plant dwarfs a little below the junction of the pear with the quince, so that the pear might put out roots of its own. These roots soon become the leading ones, and and from disuse and *deep planting* the quince roots soon decay. Out of a large number of dwarfs planted some years ago, and recently moved, only one tree retained any quince roots.

Prevention of Sap Blight.

John Grable, Doniphan Co., Kansas, writes to the *American Agriculturist* on this subject as follows: "Heart and Bigarreau cherries, that have been planted in north-western Missouri for 15 years past, have come to nothing, while Morellos do well. This is owing to their being killed by sap blight, which I have noticed to occur in February. It is caused by sudden thaws, followed by hard freezing, which loosens the bark on the tree, except a little on the north side. A tree under these circumstances will survive for a while, but when the blight extends around the trunk, it is 'done for.' This happens, on an average, every four or five years. As far as my experience goes, the best remedy is, to prune the trees to low heads, and wrap the trunks with strips of old drab-colored cloth, which preserves them from sap blight, and from rabbits. Two years ago, I planted 23 apple trees in October, and thirteen of them were ruined by sap-blight in February. This seemed to prove to me, that Fall planting was more critical than Spring planting, as there were many trees of about the same size, planted in the same locality in the Spring previous, and not one of them suffered from the blight."

Rotation in the Garden.

Probably many readers of the *Agriculturist* are puzzled when they see a plant spoken of as belonging to a certain family. By this is meant that different plants, though unlike in many particulars, have some points in common, and have, as it were, a family relationship. Those who make an especial study of plants, group all that are known, into a not very large number of families; their reasons for doing so are sometimes drawn from something in the flower or fruit which persons in general would not notice, and again upon resemblances which are sufficiently striking to be observed by every one. Thus, the bean and the pea are so nearly alike in flower and fruit that we naturally suppose them to be related, while carrots and celery do not seem to go together so readily, because we are not accustomed to see the flower and fruit. Plants of the same family, being made on the same general plan, are commonly very much alike in their properties, and take up very nearly the same substances from the soil. In the rotation of crops it is desirable that the soil should be occupied not only by a different plant, but by one of another family from that which it previously bore. In farm cropping, the number of kinds are so few, that there is no difficulty in fulfilling this condition; but in the garden, where a number of sorts are grown, the arrangement of a proper rotation requires some forethought. The following grouping of the common garden vegetables will assist in making out a proper system of succession. Turnips, cabbages, cauliflowers, borecole, broccoli and radishes belong to one family—parsnips, carrots, parsley and celery, to another—and so with lettuce, endive, salsify and scorzonera—beets and spinach — cucumbers, watermelons, and muskmelons—potatoes, egg-plant and tomatoes—beans and peas—onions, leeks and shallots. Onions are an exception to the rule of relations, and are successfully grown year after year upon the same soil. Root crops, which grow mainly in the soil, should be followed by some crop cultivated for its leaves, etc. To illustrate—in the above enumeration, it will be seen that carrots should not follow or be succeeded by parsnips, parsley or celery, as they belong to the same family, nor by beets and other root crops—but may precede or follow anything else. Where circumstances render it necessary to plant a crop successively upon the same ground, the soil should be well manured and deeply and thoroughly worked.

Garden Walks for Exercise.

A friend writes us that, in his large grounds, he has laid out a series of walks so arranged that by going over one track a certain number of times, the extent is a mile. Against a wall he has affixed an iron strap pierced with holes, by the side of which is a pin suspended by a small chain, so that the pedestrian, by moving the pin from one hole to another every time he passes it, knows exactly the extent of his walk.

This is all very well, when one can't do better. We have known persons exercising by the clock in their rooms, or pacing back and forth over a few rods of pavement, and amid the same scenes, by the hour. But it strikes us that when one wishes a smart walk, he had better launch forth from his garden, and perambulate the public street, so that he may see new faces and new scenes. Or, if there is work to be done, put on the garden outfit, and with hoe and water-pot or other implement, he will soon get pleasant healthful exercise. This is the writer's experience.

Grape Vines.

When the demand for choice grape vines is greater than can be supplied by the ordinary modes of propagation, some nurserymen multiply them by cuttings of the *green* wood. It is the experience of many of the best cultivators that vines propagated year after year in this way deteriorate and become less hardy. The Delaware is cited as having especially suffered from this mode of treatment. It seems very likely that continued propagation from unripe shoots would produce weak plants. We should not think of sowing from seed so immature that it is just capable of germinating; a feeble plant would be produced—and, though the circumstances are not precisely the same with cuttings, there is no doubt that strong well-ripened wood will give plants of greater vigor than can be raised from green cuttings.

Lilies for City Gardens.—These showy flowers are worthy an occasional place in even small collections of plants; but all are not well adapted to growth in the smoky city atmos

phere. The large white, and the speckled orange do well; the latter will thrive under trees. The Martagon, Thunberg's, the tiger-streaked, and Cateby's, require the freer air of the country.

Miniature Rustic Plant Stand.

While recently at the Horticultural warehouse of our friend, C. B. Miller, who is well known in this vicinity, as the Secretary of the Brooklyn Horticultural Society, we observed the beautiful miniature rustic plant stand, represented above, devised by him we believe, and its appearance was so pleasing that we ordered an engraving of it to be made. It consists of a simple oval shaped box, with slips of wood tacked around the sides, the bark still adhering, and an arched frame of vine-work raised above it, the whole being nicely varnished. A shell containing a trailing plant rests upon the top; underneath this is suspended a miniature globe filled with water in which swims a small gold fish. Ferns and other plants are grown in soil covered with moss in the box at the base, and delicate vines are trained to the side frames. The whole forms a unique and tasteful ornament for the sitting room, costing but little to make or to purchase.

City Gardens.

Gardens in towns, especially when of considerable age, are apt to become sodden, sticky and infertile. The trees and plants set out in them do not grow well, but become mossy, cankered, and even die outright from no apparent cause. It is not generally from want of manure, but oftener from too much of it; not from want of water, but oftener from an excess of it; not because the soil is too new, but because it is too old.

But to be more particular: whoever has such a sickly garden, should look first after the drainage. Very likely, he will find the pipes choked up, and consequently the pores of the soil flooded and clogged with matters which ought to pass off through the sewers. Water and manure are good enough in suitable quantities, but too much are hurtful; just as food and drink are good for the animal frame when moderately used, but in excess are injurious. Standing water fills up the interstices of the soil, preventing the needful free circulation of air to the roots.

The drainage having been overhauled and cleaned, take the soil itself. Most likely, it will need trenching, and bringing up some of the subsoil to mix with the worn out top-soil. Or, cart off some of the surface earth, and bring in an equal quantity of maiden loam from the meadows of the suburbs. By some means or other, change and freshen the soil. An occasional syringing of the foliage of trees and plants will be useful, to clean off the dust and smoky deposits of the city, but it is most important to put the soil in proper condition, and keep it so.

Walls for Gardens.

The custom of surrounding gardens with substantial walls, prevails in England and Scotland, more than in our own country. The principal reason is, that there the light and heat of the sun are not intense enough to ripen some of the choicer fruits in the open ground; these need to be concentrated by some artificial means. With us, if peaches, pears, plums, and grapes, are trained close upon the sunny side of a wall, they are very apt to be dried up and injured, both in foliage and fruit. Yet, there are uses to which walls and high fences may well be applied. In all elevated and bleak places, they are serviceable in breaking the force of winds, and preventing the too rapid radiation of heat from the soil. For this purpose, they are specially useful in the early Spring. In a garden so protected, grape-vines, cucumbers, melons, etc., may be brought forward much earlier than in one exposed to cold breezes on all sides.

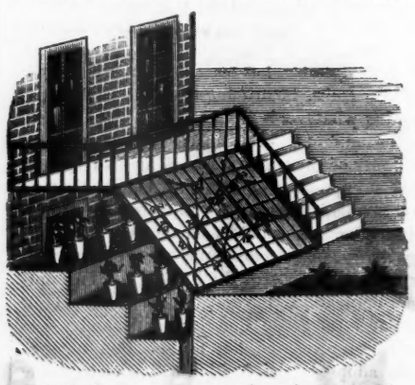
Such walls are very useful in protecting grape vines against unseasonable frosts. We now recall a locality near the center of this State, where it is almost impossible to raise grapes, on account of the untimely frosts in Spring and Fall. Sometimes the late spring frosts destroy the fruits in the flower, or the September frosts freeze them before they are ripe. Not to be outdone by king Jack, a few enterprising fruit-growers have built walls, mostly of brick, on the north side of their gardens, on which they raise grapes with considerable success. The accumulated heat of the day radiates slowly during the night, and preserves the vines from harm, even when other tender things in the open ground of the garden are cut off. These walls are also furnished with a coping, about a foot wide, sustained by brackets like the cornice of a house. This coping is removed during the mid-summer, to allow the foliage the full benefit of rain and dew. To prevent the vines from being scorched by the sun, they are trained upon a trellis which is set off several inches from the wall; this allows the free circulation of air behind. Upon a wall, facing in almost any other direction than due south, there would be little danger from sun scald.

The California Pitcher Plant.

The locality for that rare California plant, the *Darlingtonia Californica* has been visited by Prof. Brewer of the Cal. State Geological Survey. It grows in a small swamp near Mt. Shasta, at an altitude of 2,500 feet. The leaves are somewhat like those of our common pitcher plant (*Sarracenia,*) are about two feet long, and have the opening of the pitcher partly covered by a curious two-lobed appendage, shaped somewhat like the tail of a fish. Though the plant was first discovered by the botanists of the U. S. Exploring Exhibition some fifteen years ago, it has never yet found its way into cultivation. The lovers of plants will be glad to learn that seeds have been placed in skillful hands, and that there is a hope that our collections may be enriched by a plant which is not only curious, but which bears a name dear to every American botanist—that of the venerable Doct. Darlington of Penn.

An Area Conservatory.

Those who have a real taste for Horticulture, will find a way to gratify it, no matter how limited their means or circumscribed their space. Hood's Mrs. Gardiner, who proposed to "cow-cumber" in her wash-boiler, is only a slightly exaggerated illustration of the way in which a passion for plants will stimulate the inventive faculties. A correspondent has sent us a drawing and description (for a long time crowded out) of an extemporized conservatory, which is here presented with the belief that many of our readers who live in cities will be glad to adopt the plan, or such modification of it as their premises may require. The engraving represents the area at the back of the house, enclosed by sash, thus affording a conservatory 20 feet long by 8½ feet wide, to which the balcony serves as the roof. One or more of the sashes are made movable, to allow of ventilation and ingress. By leaving the kitchen windows open, the temperature is ordinarily sufficiently high; but to ensure this in severe weather, hot air is brought from a furnace in the cellar by means of a flue. Where there is a water back to the kitchen range, the heating might be accomplished by pipes connected with it. The moisture from the operations of cooking and washing, generally keeps the air in the conservatory sufficiently humid, but when it is necessary to introduce hot air from the furnace, care is taken



that it shall pass over water in order to avoid a dry heat. The whole cost of the structure was not over $30. No doubt many of the readers of the *Agriculturist* have felt the want of a place for their plants, and will be induced, upon seeing this simple plan, to examine their premises with a view to a similar contrivance. Such a structure admits of a large number of pots, and adds much to the attractiveness of home.

A HINT IN TRANSPLANTING.—The practice of lifting a tree up and down and shaking it, at the time of transplanting, is of doubtful utility. The aim is to settle the dirt closely around the roots; but then it draws the roots out of their proper

place, and bends and breaks many of them. Such trees often show that they are injured, by throwing up suckers. A better way is to work the soil in among the roots with the hands, and perhaps apply a little water to wash it in, when the work is about half done.

THE HOUSEHOLD.

Good Feet Warmers.

The best feet warmers are: frequent applications of water and a coarse towel, dry woolen socks, thick boots, and exercise. These will usually keep the feet of an active person comfortable in any but the most excessively cold weather. Sometimes, however, it is necessary to take a long ride when the thermometer marks a temperature near zero, during which brisk circulation of the blood can not be kept up by exercise, and without some additional precaution, the feet are liable to great discomfort. If the socks be dry and the feet be well warmed before setting out, the heat may be retained for a long time by wearing heavy woolen socks or moccasins over the shoes. These can be made of extra stout yarn, or more cheaply and easily by sewing together properly shaped pieces of thick blanket. Moccasins of buffalo skin, with the hair inward, are admirable protectors of the feet in traveling. Occasionally, owing to feeble health, the circulation of blood is too sluggish to generate a comfortable degree of heat in the system, and persons suffer from cold, whatever the amount of clothing worn. The extremities, particularly, feel the want of a full supply of natural animal heat. In such cases heat must be derived from external sources. Vessels of hot water, heated blocks of hard wood, bricks, etc., are commonly used to keep the feet warm. A better article for this purpose than either of the above named, is a block of soap-stone, which retains heat for a very long time. Enclosing it in a convenient woolen bag will keep it warm considerably longer than if it be left exposed. A correspondent of the *Agriculturist*, (E. S. Osborn, Suffolk Co., N. Y.,) who has tried this material for several years, has found it so good that she thinks it would be an excellent charity to furnish such blocks in large numbers to the poor in cities. Perhaps it might abate some suffering, provided enough fuel to heat the blocks with, were supplied at the same time.

Slipping Down—"Creepers."

The number of bruises, broken limbs, sprained joints and other casualties resulting from slipping down on ice-covered ground, if carefully summed up, would amount to hundreds of thousands every year. Suppose that among the twenty five million inhabitants of the colder States and British Provinces, only one person in a hundred should fall down so as to receive injury. This would amount to **250,000**—quite an army even in latter days. Old persons who are not agile, and whose bones are brittle, and least likely to unite quickly if broken,

Fig. 1.

Fig. 2.

are most apt to suffer. We have known of several such cases of very serious injury. There are several contrivances to prevent slipping, two of the simplest of which are represented in the accompanying engravings, that are somewhat old, but not generally in use. Fig. 1, is a piece of flat iron, split twice at each corner with the sharp points turned down, and the middle pieces turned up and punched with holes for straps. Fig. 2, shows the method of attaching it to the boot or shoe just forward of the heel. Any blacksmith can readily make them, or they may even be made at home. The length of the points is to be proportioned to the hight of the heel; the points will need to project scarcely more than ⅛ inch below the heel. The housewife will of course see that these heel pieces or "creepers" are left behind at the door. Fig. 3, represents a form usually sold at the hardware stores for about 25 cents per pair. They are of cast iron, and are fastened on, or loosened, by turning the screw (*A*) at the heel. The points (*B*) are turned inward so as to catch into the leather, and hold them on firmly.

Fig. 3.

Potatoes in the Bins.

INTERESTING FACTS FOR "SPROUTERS" TO THINK OF.

If the family supply of potatoes has been stored in a moderately warm place, they will soon need attention. They must be looked over and the sprouts rubbed off—or 'sprouted' as it is termed. A dark, cool and dry place is best. The cooler they are kept without freezing, the less likely they will be to start. Rubbing off the sprouts is good indoor work for stormy weather, but as it is rather dirty and monotonous, it is not a job that is much relished. Persons do not generally like any work, however easy, provided it is merely mechanical, and offers no employment for *mind* as well as the hands. Let us see if there is not something interesting in sprouting potatoes. Many of the potatoes will be found to have a bit of stem attached—the remains of an under-ground stem, of which the potato is the enlarged end. It is the channel through which the potato received all its nourishment, and grew to such rotund proportions, but like many who have grown fat and prosperous, it seems to have forgotten the means by which it became so, and instead of giving back any of the rich stores it has received through it, the over-fed potato leaves the little stem to perish. The new sprouts all start from the eyes of the potato, which are much more numerous and closer together as we go from the stem end. These potato *eyes* are arranged in a peculiar manner. If we start with an eye near the stem end it will be found that the eye next above it is placed a little to the right, the next a little to the right of that, and so on, thus forming a regular *spiral*. The arrangement is best seen in the longer varieties. The sprouts start first from the end farthest from the stem, and if these are allowed to grow, many of the others will not start at all. The potato having once made up its mind to grow, is not to be easily thwarted, and if all the sprouts are rubbed off, the operation very often has to be repeated a second or third time.

If we examine a potato eye closely, several little spots will be observed; each of these are *buds* from which sprouts may spring. If one or more of these starts and are allowed to grow, the rest finally perish; but if the first sprouts are removed then the reserved forces are called up, and a new crop of sprouts appear; and this is repeated again and again until the last one of the supply of supernumerary buds is entirely exhausted.

The potato looks like a stupid thing, but it seems to show a kind of instinct. The sprouts in the bin or barrel, far away from the earth, throw out roots which go traveling off in search of sustenance—as if knowing that the supply for the young plant, contained in the potato, could not last long.

Inside of the potato curious chemical changes are going on. The starch which is put there to supply food for sprouts or young plants, undergoes a transformation. It has to be moved in order to aid the young growth, and as it is not soluble in cold water, it is changed so that it can pass to where it is needed. It is partly converted into sugar, as may be seen from the sweet taste poorly kept potatoes have in the spring. We have not said all that the occupation of sprouting potatoes suggests—but enough we trust to show the readers of the *American Agriculturist* that there is much to learn about common and every day things, which apparently possess little of interest.

To Prevent "Chapped Hands."

The writer was formerly much troubled with chapped and cracked hands, so much so as to constantly feel uncomfortable. Latterly, I have been entirely free from this source of trouble, and, except when obliged to handle frozen substances, I no more think of wearing gloves or mittens on my hands, than I do of covering my face. This good result I attribute wholly to a hint given in my *American Agriculturist* a few years ago, which I would like to have repeated for the benefit of others. It was in effect as follows: The *cuticle* or scarf skin is designed as a handprotective covering, and when sound, it serves this purpose admirably. Pure water does not affect the cuticle; but add a little soap or other alkali to the water, and it at once attacks the cuticle and will in a short time dissolve it off. I now avoid the use of soap as much as possible, using a brush to remove most kinds of soiling. When soap is absolutely required to remove oily or greasy matters, I keep it on the hands as little time as may be, and rinse off the last vestige thoroughly, leaving none to corrode and crack the outer skin. Generally, I dip the hands in water in which a few drops of vinegar have been poured; this neutralizes the alkali of the soap. Wife does the same on washing day when the hands must be put into soap suds. I formerly applied vinegar to the face after shaving, but now use a little cheap Cologne water, or common whiskey, which removes the alkali, and keeps the whiskers black—not faded as when nothing was used after the lather. FARMER.

A Short Chapter on Bonnets.

The Fashion in 1860. The present Style.
What Next?

About Illuminating or Coal Oils.

Perhaps no household topic is of more general interest than that of the *oils*, to which we are so much indebted for the comfort and cheerfulness of our homes. A few years has brought a great revolution in our domestic economy, which is nowhere more strikingly seen than in our methods of illumination. Whale oil gave way to the dangerous camphene and burning fluid, and these were in turn superseded by coal and mineral oils. The whales are left comparatively unmolested, it being much easier to catch a few tons of coal than it is to capture one of those monsters. Turpentine, from which camphene and burning fluid are manufactured, is so scarce, that were these articles in general use, the demand could not be supplied. Happily the facility with which better illuminating oils can be procured from coal, and the wonderful discovery of the oil wells, have given us a better and cheaper light. Our readers are well aware that there are two kinds of mineral coal; the hard or anthracite, and the soft or bituminous. The latter, which is the kind most known at the West, burns with a flame, and is the kind used in making the oils and the gas for lighting cities. If bituminous coal be heated in a closed iron vessel, shaped like a bottle, the portion which would have burned with a flame, had the coal been on the open fire, will be driven off as a gas, and may be lighted at the mouth of the bottle. In gas making, the coal is thus heated, and the gas, after being properly purified, is carried by pipes a long way

even miles from the place where it is made, to be burned. The success in gas making depends upon using the proper amount of heat to convert into gas as much as possible of the volatile matter of the coal. A lower degree of heat slowly applied, produces from the coal but very little gas, but what would have otherwise been gas, is obtained as a thick tarry oil. This is the first step in preparing the coal oils, and by refining this crude oil, several products are obtained. Sulphuric acid (oil of vitriol) is added to the crude oil which helps separate the tar and other impurities, then lime is added to neutralize the acid, and the thinner portions of the liquid are poured off and distilled. This liquid contains several distinct oils which have different boiling points. In the distilling processes the heat is applied very gradually; at about 80°, a very volatile liquid is obtained and as the heat is increased, other oils having higher boiling points are distilled, the last of these requiring a heat of over 500° to convert them into vapor.

The liquids first obtained, which boil at so low a degree, are unsafe to use for illumination. They are known as Naptha and Benzine, and are of great value in the arts. They have the power of dissolving all greasy and resinous substances, and are used for cleaning clothing, dissolving india rubber, mixing with paint in place of turpentine, etc. After these very volatile oils have distilled, others are obtained, having higher boiling points, and these are used as burning oils, and are known as Kerosene, and by a number of other trade names—all being essentially the same thing, but differing in their color, density and boiling points. The oils which are obtained by distilling at a high temperature are used for greasing machinery. There is deposited from the oils after distillation, a whitish substance which is collected, purified, melted, and made into cakes. This is Paraffine; it looks something like white wax, and is made into beautiful candles of great illuminating power. It melts so readily that it cannot be used pure for candles, hence those sold as Paraffine candles are in part composed of spermacetti and other substances, to render them firm in warm weather. Great quantities of illuminating oil are obtained from the Petroleum or oil from the oil wells. Here the first step in the process is done by nature, and crude oil is furnished ready for the refining process. The illuminating oils from Petroleum, known as Carbon Oil, and by other names, are essentially the same as those made from coal. All these consist of mixtures of oils, having different boiling points, and those are the safest which have the least admixture of naptha. Kerosene and similar oils, when properly prepared and burned in suitable lamps, are not liable to form explosive vapors, but if from carelessness or fraud on the part of the manufacturer, they contain much naptha, they are dangerous. No oil is safe to use which will give off an explosive vapor below 110°. The coal oils in the market generally form an explosive vapor when heated to 130° or 140°, and those from petroleum do so at 100° to 120°. The density or weight of a sample of oil is no indication of its freedom from explosive qualities; this can only be ascertained by experiment. Apparatus is made and sold for the purpose; but a sufficiently correct test can be made by putting a little of the oil in a tin cup, which is to be placed in a large vessel containing water A thermometer is placed in the water, and the whole put upon the stove, and allowed to heat very slowly. A lighted match is applied from time to time to ascertain when the oil in the cup forms an explosive vapor, the temperature at which this takes place is indicated by the thermometer. The light should not be applied to the oil, but should be held just within the edge of the cup. It is wonderful to think as we sit by the cheerful coal fire and read by the light of a Kerosene lamp, that we are enjoying the same light and heat which came to the earth ages and ages ago. The plants which produced the coal and rock-oil grew by the aid of the sun's rays, and—as every plant is now doing—locked up a portion of light and heat in their stems and leaves. Whether we burn the wood which has grown within our own observation, or that which grew longer ago than we can calculate, and has become coal, we only set free the light and heat which the sun furnished it to enable it to grow. Then how wonderful the human skill which takes these "black diamonds" from the dark mine, and by aid of chemistry makes them to shine and fill our homes with their brilliancy.

Tim Bunker on Extravagance.

"Forty-five thousand dollars for jewelry in New-York, at one store, in one morning!" said Mrs. Bunker as she took off her specs, and laid down the Times, in which she had just read that account.

"And how many stores do you 'spose they've got in New-York, where they sell them 'ere fixins," inquired Mrs. Seth Twiggs, who had dropped in with her knitting, and sat in a meditative mood, while Mrs. Bunker read the war news. (Seth used to take the daily paper himself, but since the rise in price, he says he can't afford it. Twelve dollars a year for a daily paper, he says, is a leetle too mighty for a poor man who works for his living. That would more than buy a barrel of flour, and it only takes two barrels to carry his little family through the year. I have noticed, however, that he and his wife are more neighborly than common, since they stopped the daily paper. I am not particularly sorry, for Seth is good company, if it wasn't for his everlasting pipe, which I abominate, as all sensible people should. What upon earth a man should want to make a chimney of his nose for, I never could see. We are kind o' lonesome, since Sally got married, and John went off to the war, and neighbors don't come amiss. Seth also has a son in the war, and we have a considerable fellow feeling.)

"There's a hundred of them stores at least," replied Mrs. Bunker.

"You don't mean a *hundred* on 'em!" exclaimed Mrs. Jacob Frink, whom the neighbors all call "Polly," for short—except a few of us older people, who say "Aunt Polly."

"What a sight of silver spoons and forks, teapots and tureens, fruit knives and porringers, they must have down there, if all the stores sold as much as that 'ere one you read about."

"It would make four millions and a half of dollars, spent in gewgaws in one morning," said I, willing to increase Aunt Polly's astonishment.

"You don't say so, Squire Bunker!" said she. "That is more than Jacob could carry in his cart."

"Well I guess it is. It would line Broadway with silver, from the Battery to Central Park," said I.

"Provided you did'nt lay it on too thick," added Mrs. Bunker, squirming in her chair, at the extravagant expression.

"I said *line* it, Sally, not cover it." I responded.

"Wa'll, it is an awful sight of money any way!" said Aunt Polly. "I fear I should covet, if I see it."

"And where do you suppose it all comes *from?*" asked Mrs. Twiggs.

"I can tell you where some of it comes *to*," answered Aunt Polly. "You see Kier has just got home from the war, wounded in his left arm. And he stopped in New-York jest to see the sights, and to get something to bring home to the old folks, and to his family up at the White Oaks. And don't you think he brought me home a pair of gold specs and a gold thimble for his wife, and a silver trumpet for his boy, Jacob Frink jr., who aint more than six months old. Now we didn't need these things any more than a cat needs tew tails. I had a pair of steel-bows that Jacob got me five years ago, and they are jest as good as new, and I can see in 'em jest as well as in the new ones, and a trifle better. And then his wife had thimbles enough, rather more than she used, any way, judging by the looks of Kier, when he used to drive the coal cart. She never kept him tidy, and I don't believe gold thimbles will help her case, if she had a cart load of 'em. And then as to that boy, he won't be big enough under a year to blow a squash leaf squawker, to say nothing of trumpets. A silver trumpet! It is the only article of silver in the whole neighborhood of the White Oaks, barring the small change they've got stowed away in their stockings, agin it comes into fashion agin. Now, Kier paid ten dollars for that 'ere trumpet, and he had no more use for it than his wife has for a pianny. You see, he had just got paid off, and he had never seen so much money before in one pile, in all his life. He wanted to make a sensashun in the White Oaks, and I guess he did it, when he bought that article. Not less than twenty five dollars, the price of blood as it were, all spent for nothin. I was riled when I see him onpack the things. Ah, if he had only got a raw hide for that youngster there would have been some sense in it."

Aunt Polly paused for breath, and looked red in the face as she doubtless remembered the wallopings she had bestowed upon Kier in his juvenile days. But there is a deal of sense in what the old lady says. You see this war has made money awful plenty, such as it is, among a certain class of people. It has got into new hands, and they are itching to let the world know that they have got it. I know of some fellows that have gone to the war that are earning more money for their families than they ever did before. There are Tucker's two boys that never did any thing but hunt, fish, and loaf, but they are now earning their rations and thirteen dollars extra, a thing they never did before, without the extra. There are hosts of contractors for steamboats, for iron-clads, for army clothing, for horses, for mules, for forage, for flour, for rations of all kinds, that are getting a big slice, and piling up money by the hat full. This money is distributed all through the country, and farmers come in for their share. Well now, it is mighty natural when folks that have been stinted for a good while, when they get hold of the cash, to make it fly. So it goes for jewelry, for bonnets, and silver trumpets, and all sorts of jimcracks that tickle the women and children, and don't do any body much good.

You see, George Washington Tucker jr., that enlisted in the beginning of the war sent home fifty dollars to his intended, Miss Almeda Georgiana Bottom, and told her she might *swell* for once, as she had never had a fair chance in life. The next Sunday I rather guess there was a sensation in the Hookertown Meeting House that kept sleepy folks awake, if the sermon didn't. She had on a pair of ear-rings, a big gold-washed watch-chain, and bracelets like Col. Smith's daughter, a monstrous swell of hoop skirts, one of those two story bonnets with pink flowers in the second story and a top knot of feathers, and to top all, or rather to bottom all, a pair of new calf skin shoes that squeaked like a cider mill. She came sailing in to meeting just after the first hymn, when Mr. Spooner was reading scripture where it says "Behold the lilies of the field," etc. The shoes made such a squeaking that he had to stop until the young woman got seated. Some of the young folks in the pew behind me tittered, and an old lady in my own pew put a handkerchief to her mouth. I suppose she wanted to cough just then, and didn't like to disturb the meeting. Mr. Spooner looked astonished, as if he had seen a vision.

Now you see this sort of thing is going on all over the country, and there is a good deal of extravagance in folks buying jewelry and knick-knacks that they do not have any use for. I suppose it is rather worse than common just now, but there has always been a good deal of it. If a man buys what he don't need, I call him extravagant, whether it is an extra acre of land, a two story bonnet, or a bogus gold watch chain, without any watch. If a man can do his business with a wheel barrow, he should not invest in a horse and cart. If his farm only affords occupation for one horse and cart, he should not buy a yoke of oxen and cart. If he has only capital to work twenty acres to advantage, he is very extravagant to purchase fifty. If he has only feed for six cows, he should not keep eight. This is one of our greatest faults as a people, and I am afraid this war, if it ends in the triumph of the government, as we hope it will, will not remedy the evil. We buy cargoes of silks, and jewelry, wines, and brandies, that we have no need of. Miss Almeda Georgiana Bottom is not the only sinner among us, not by many a hundred, I tell you.

Hookertown, Jan. 1st, 1863. Yours to command, TIMOTHY BUNKER, Esq.

Adulterations.

Many of the articles in common use in families are subject to fraudulent mixture, especially those which are sold in the ground or powdered state. Ground spices are, from their high price, not only adulterated with other substances, but inferior and damaged articles, such as could not be sold in the whole condition, are made into powder. The additions made to spices are not generally of a deleterious nature, but are simply a fraud upon the buyer, who gets much less of the real article than he pays for. Old ship biscuit and Indian meal flour, and ground oil cake are among the substances used, and tons of these are annually sold at the price of spices. The value of spices depends upon the oil they contain, in some instances the oil of cloves and cinnamons is previously extracted and the articles afterwards ground and sold. We have known a wholesale dealer to keep three sorts of ground ginger, which he sold to retailers at as many different prices, under the names of fresh, pure and extra. These differed only in the proportions of meal they contained. It is very difficult to find pure ground mustards; much of that in the market contains very little of the flour of mustard seed, and a great deal of the flour of wheat, with turmeric to give a fine yellow color. Having occasion some time ago to make use of a mustard poultice, we were obliged to make four trials, with mustard bought at different places, before we could find any which would produce any redness of the skin, or even a feeling of warmth. Cayenne pepper, which, from being troublesome to prepare, is usually bought ready ground, is much adulterated. This is often mixed with harmless substances, but sometimes red lead, which is poisonous, is used to bring up the color. Pure Cayenne is of an orange red color; any which is bright red or scarlet should be looked upon with suspicion. Where a spice is much adulterated the lack of proper taste and smell will detect it—but such pungent articles can be mixed with tasteless materials to a considerable extent without materially altering the taste or smell. Adulterations can be readily detected by the microscope, but there are few who have the skill and the means to make the examination, and the only safe way is to purchase the articles unground, and pound or grind them in the house.

Beans and Peas as Food—Hints on Cooking Them.

We suspect that economical housekeepers are not generally aware of the value of beans and peas as a source of nourishment, or these articles would be more freely consumed. They are similar in composition, both containing a large proportion of nitrogenous compounds, which supply direct nutriment to the muscles of the body. In fact, they furnish the most concentrated form of strength imparting vegetable nourishment. Travelers over the eastern deserts, who have occasion to carry the greatest amount of life sustaining food in the least weight, take with them the roasted chick-peas, which are similar in composition to our common beans and peas. The Chinese prepare a cheese from peas, which is quite like a milk cheese. The peas are boiled to a thin paste, strained through a sieve, and the curd obtained after coagulation is treated like that from milk. Beans and peas are by some considered to be difficult of digestion, and constipating. The constipating property is probably due to the fact that nearly all the substance is converted into nutriment, leaving little solid waste material to excite and produce evacuations of the intestines. This can be corrected by eating coarse and bulky food with them. The difficulty of digestion is due mainly, we think, to the method of cooking too often practised. The skin of the kernels is almost absolutely impenetrable to the gastric juice of the stomach. If the skins be not thoroughly broken in cooking, or in eating, the gastric fluid can not do its work, and heartburn or pain in the stomach is the result; while the undigested kernels or parts of kernels pass into the intestines, and by fermentation these produce gas, leading to flatulence (colic). Let the beans or peas be so thoroughly cooked as to form a soft, mushy mass, and they will be easily digested, and the evils above referred to, will be obviated. A very common process is to boil them for a time, and then complete the cooking by baking them with pork. They are then dry, and the skin mainly unbroken, except slight cracks or checks upon one side, and being coated with baked lard, they are in the worst possible condition to be easily transformed into nourishment in the stomach. Baked "pork and beans" is with some a favorite dish, and those having the "stomach of an Ostrich" can manage to digest a considerable portion of this material, espe cially if they take the time to chew it finely before swallowing; but as a rule, for children and those having but an ordinarily good digestion, it is best to leave out the pork. Beans are abundantly rich themselves, without the addition of baked or boiled pork fat. The best mode of cooking is, to boil them, in soft water only, to a mushy condition, so that the skin shall be thoroughly broken up. A piece of lean meat may be boiled with them to change the flavor, if desired, though good beans in a well cooked soft state, have a rich butter-like taste of themselves, without any addition except salt. *Soft water* is essential to the good cooking of beans. Pea soup is about equally nutritious with that made from beans, and their frequent use will render them palatable.

Hints on Cooking, etc.

Good Breakfast Cakes.—Mrs. M. Hollingsworth, Armstrong Co., Pa., contributes the following to the *American Agriculturist:* Take equal parts of wheat flour, buckwheat, and corn meal sifted, enough to make a batter with 1 pint skim milk (sweet), 1 pint sour milk, or buttermilk, 1 egg, 1 teaspoonful each of salt and cooking soda. Bake and serve up the same as buckwheat cakes.

Griddle Cakes:—Preferred to buckwheat by the contributor, O. B. Fenner, Marion Co., Ill. 1 gill of good yeast, ¼ teaspoonful of salt, 1 qt. of blood warm water, 1 cup of Indian meal, 1½ cups of rye meal. Thicken with flour. Let the Indian and rye meal be sifted through a coarse selve; mix at night for the next morning's use, and set in a place warm enough for them to rise. In the morning they will be exceedingly light and spongy; then add about 1 teaspoonful of saleratus, or enough to make them sweet; (a little smart taste before frying is not disagreeable or hurtful). Fry on a hot griddle, and eat as soon as fried.

Corn and Pumpkin Bread.—Mrs. Rhoda C. Whitford, Addison Co., Vt., contributes the following to the *American Agriculturist.* Take 3 quarts of corn meal, and pour on boiling water enough to scald it. Add 3 pints of stewed pumpkin (cheese pumpkin is best), 3 pints coarse wheat flour, buttermilk or sour milk enough to make soft dough, and 2 teaspoonfuls saleratus. Bake 3 hours.

Saratoga Rolls.—Contributed to the *American Agriculturist,* by A. B. Shattuck, Chatauqua Co., N. Y.: Take 1 pint sweet milk, 2 pints flour, 2 tablespoonfuls butter, 4 tablespoonfuls yeast, and ½ teaspoonful saleratus. Beat thoroughly and let it rise 5 or 6 hours, or all night, if for breakfast. Pour in a shallow pan and bake half an hour.

Hints on Making Tarts.—"Vermont Subscriber" in a letter to the *American Agriculturist* about seeds, adds: "My wife saves trouble and patience, things that ought to be saved, thus: Instead of cutting out bottom pieces of dough, and then sticking on an edging or rim that often comes off, she puts the round piece of dough into a small scolloped tin plate, about three inches across at the top. The dough bended up at the sides for half an inch forms a nice edging. If the dough be rich in shortening, no greasing of the tin will be needed."

Sausage Recipes.—E. Dexter, Windham Co., Conn., sends the following, which he says is pronounced excellent by those who have tried it: To 100 lbs. of meat add 9 teacups of salt, 5 teacups sage, 3 teacups pepper, 2 teacups summer savory, and 1 teacup of ginger. After mixing thoroughly, pack closely in tin pans, make the surface smooth, and cover with melted lard to the depth of ¼ inch. By thus excluding the air it will keep for several months as fresh as when first made.

The above directions appear to us to be too *spicy* and not sufficiently definite. The pepper and sage should suffice, we think, without the summer savory and ginger. However, tastes differ, and the mixture may suit many. The amounts of ingredients should always be stated in pounds and oz.: some teacups contain nearly twice as much as others. The following proportions for sausages were furnished at our request by Mr. W. H. Cady, Columbia Co., N. Y., one of the best sausage-makers that ever supplied the writer's table. They are: 40 oz. salt, 8 to 10 oz. pepper (according to taste), and 8 oz. sage, to every 100 lbs. meat.

Superior Pudding.—Contributed to the *American Agriculturist,* by Mrs. E. E. Vedder, Marquette Co., Wis. Boil two quarts of milk; rub one egg in flour sufficient to make it dry enough to rub through a sieve. Stir the egg and flour in the boiling milk; cool, and add four eggs well beaten, and one tablespoonful of sugar. Bake the same as custard. Serve with a sauce of butter and sugar well beaten; use any flavoring desired.

Pepper on Salt Pork.—A subscriber writes: After a layer is packed, with an oak stave press the pork from the side of the barrel and fill the space with salt. On every layer put fine ground black pepper enough to make the pork look black. Any person who tries this will never after omit it. [This may impart a better flavor to the meat, but the use of so much pepper is objectionable.—Ed.]

Stuffed Beef Steak.—Pronounced superior, by the contributor of the directions for cooking it, Mrs. H. L. Johnson, New-Haven Co., Conn. Take a large round steak free from bone; make a dressing the same as for turkey, and spread it on the meat. Roll it up tightly, put it in a cloth and boil for one hour in just enough water to cover it.

Suet Pudding.—For competition with the Queen of Puddings, described in the December *Agriculturist,* page 372. Contributed by O. B. Fenner, Marion Co., Ill.: 1 cup of suet, 1 cup of molasses, 1 cup of raisins, 1 cup of sweet milk, 3 of flour, ½ teaspoonful of saleratus, and a little salt. Any spice added, the writer thinks wasted, but others can spice to their taste. After mixing, place the pudding in a tight tin kettle, set the latter in a boiler, and steam from 3 to 4 hours.

Waffles.—1 qt. of sweet milk, 2 eggs, ½ teaspoonful of saleratus and a good pinch of salt. Thicken with flour to a batter. Bake in waffle irons.

Good Cough Medicine for Children.

We have little faith in "universal remedies," and seldom publish in the *American Agriculturist* either prescriptions or advertisements for medicines of any kind. What is one man's meat is often another's poison. In giving the following cough remedy, we therefore offer it only as one that for seven years has almost always proved effective in our own family. Put into a vial equal proportions by measure of *Syrup of Ipecac, Paregoric,* and *Castor oil.* Shake well together, and always shake before using. From half a teaspoonful to a full teaspoonful given to a child on going to bed, or at other times, usually checks coughing after a few minutes. If needed, the dose is repeated after three or four hours. It is well to begin with half a teaspoonful and increase the quantity if needed. The food should be light, or the syrup of ipecac may produce a little nausea.

"Figures won't lie," is an old and homely expression; yet few can look on a fashionable woman's figure now-a-days and say as much.

The coat of a horse is the gift of nature. That of many an ass is often the work of the tailor.

Beauty without virtue, is a flower without perfume.

LOOKING AT GRANDPA'S WATCH.

Engraved for the American Agriculturist.

The Editor with his Young Readers.

About the Picture.

Which is the happier, the child or his grandfather? The watch is a greater wonder to the little fellow than all the curiosities of the Museum would be to older persons. With what delight he looks at the shining wheels, and listens to the *tick-tick* which make it appear like a living thing. But that is not the whole of his pleasure. Notice the hand on the old gentleman's shoulder, showing the arm affectionately thrown around his neck, saying as plainly as words could do, "I love Grandpa." See too, how earnestly the grandfather is looking at the watch. He has seen it a thousand times, why is he so interested? He loves the little one so much that he partakes of the child's feelings, he *sympathizes* in his joy. Every girl and boy looking at this beautiful picture will feel like saying, "What a *dear* old man." Although his features are sharpened by age, love makes him beautiful, makes him happy, and it is a pleasure to look upon him. And right here is the secret of the brightest charm of life, for the young and for the old. Selfishness spoils the heart, disfigures the face, and ruins peace; kindness, affection, love, are sources of constant joy to the possessor as well as to those about him; they give beauty to the spirit, which will outshine and outlast every other attraction.

A Harmless Monster.

A young lad of our acquaintance was one day weeding in the garden. The weather was very warm, and he wore neither coat nor vest. He was very busy over a bed of carrots, that is, his fingers were, his thoughts were full of something else, as you could see by his steady and almost vacant stare. But suddenly he gave a startling scream, sprang from his sitting position, threw his hand wildly over his shoulder, and writhed and twisted as though striving to escape from the hold of some terrible monster. His countenance was ghastly with the agony of fear. The writer sprang to his relief, and found him grasping something which had made its way to his shoulder, under his shirt. Could it be a snake, or a rat? The collar was quickly loosened and the fearful thing came to light. It was a large *grasshopper!* From that time to the present, that boy, who is now a man, has made it a rule to first see if there were danger, before losing his wits from causeless fear. A very good resolution for all; he who can keep it will be likely to keep his wits also.

A Cat giving away her Kitten.

We have known instances where parents have given away their children that they might be better provided for, but this is the first time we have heard of such a proceeding among animals. A correspondent vouches for the truth of the following incident which he says occurred in the family of one of the subscribers of the *American Agriculturist*. Mr. B, had two cats, both long domesticated in the house. A short time since each had kittens. The owner wished to rear one kitten at the barn that it might keep the rats and mice within bounds. He therefore took one cat with one kitten (having killed the others of her family), and made a nest for them at the barn, where they staid for a while quite contentedly. One night there occurred a very hard storm of wind and rain. The next morning, as soon as the family were up, the cat brought the kitten to the house, apparently half drowned, and placed it in a box containing the other family of kittens, refusing ever after to have any thing to do with it. The children placed it time and again by its mother, and every means were tried to induce her to take to it again, but without avail. The other cat, among whose kittens it was placed, received it kindly into her family, and nursed and brought it up as though it had been one of her own litter.

A Young Editor.

It is very seldom that room can be spared in the *Agriculturist*, to speak of the books, magazines, etc., which publishers often send to us for examination; all the space is wanted for what will interest our readers more. But here is a magazine just received from Portland, Maine, about which we must say a few words. Its name is "King's Lady's Book." It is about five inches long, and three inches wide, contains eight pages, besides a neatly printed cover, and is published monthly at twenty-five cents a year. Its editor is nearly *eight* years old. His father informs us that the lad selects his own articles, and sets up the types on which they are printed. We believe him to be the youngest member of the profession, and extend to him the right hand of fellowship. We hope that his arduous duties will not impair his health, nor stop his growth. Let his parents take care that his mind be not developed at the expense of his body, which too often occurs with children. Now, for some of you boys, and girls too, from twelve to fifteen or more years old, it will be a capital thing to commence issuing such a paper in your own neighborhood. It is not necessary to print it. Write it out on foolscap paper. Get your schoolmates to contribute to it, and come together once a week to hear it read. Several journals of this kind were started among our young friends a few years ago, after reading the advice then given, for them to have their own newspaper. Perhaps such an enterprise will be the first step toward raising up a future editor of the *Agriculturist*. If so, he will be all the more capable for having commenced young.

Another Perfumery Story.

A correspondent at Racine, Wis., after reading the story of "The Horrified Dandy," in the November *Agriculturist*, contributes the following "of the same sort" which he says actually occurred. When "boarding round" was the fashion with school teachers, farmer A, on coming to the house at tea time, was introduced to the "school ma'am." In a moment he perceived a strong odor of musk which came from the school ma'am's clothing. He, entirely ignorant of the cause, immediately charged it on Ponto, who had a strong propensity for hunting muskrats, and at once commanded him: "Ponto, you scamp, you have been killing *musk*rats; go out doors, sir, and get sweetened off." But Ponto did not stir, and Farmer A spoke again more sharply, "Get out, you'll scent the whole house." The school ma'am by this time was blushing red as crimson, while the girls and the boys could scarcely keep from bursting into laughter. One of them, unnoticed, at last made their father understand how the matter stood, and he, of course, dropped the subject. The evening passed away rather awkwardly with all, and the teacher failed to return the next day. On her account, the affair was kept quiet until after she left the neighborhood, when many were the hearty laughs had over farmer A's error and the schoolma'am's discomfiture. She omitted musk thereafter.

Learn to Control the Voice.

To keep the lungs and the voice in good condition, it is necessary to give them plenty of exercise. This is doubtless one reason why it is so natural for young people to laugh, shout, and sing. The Creator intended that their vocal organs should be well developed in youth, and so it is found almost impossible to keep a child quiet long at a time. But, boys and girls, you who are old enough to think about the matter, do not let this natural impulse make your company unpleasant to older persons. Let the playground, or the fields, ring with your happy shouts; there is plenty of room for noise there, and it will do you good, but in the house, learn to speak quietly. Keep the voice down to a pleasant tone. Loud words are very annoying to a tired or nervous person. Fathers and mothers would be "cross" much less frequently, and children happier, if this rule were generally observed; practice would very soon make it a habit.

The Game of Initials.

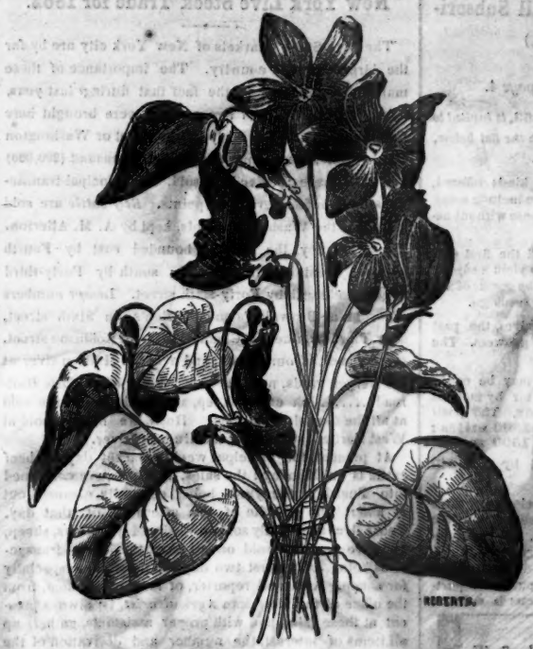
R. F. Roberts, Racine Co., Wis., writes to the *American Agriculturist*: "I used, when a boy, to think the following game was very interesting and somewhat instructive, and indeed have joined in it since I attained my 21st year. One of the company selects the name of some animal, reptile, fish, or insect, and gives the initial letter, mentioning to which class it belongs; the company to guess the name. For instance: "*P., in birds.*" Those guessing, give the name of the birds they think of whose names commence with *P.*; as pigeon, pelican, peacock, partridge, etc. The one who gives the right answer proposes the next question. Of course those names are selected which are supposed to be least known. I recollect once the initials *G. W. T.*, in birds, were proposed, and the whole company had to give it up. The name may not be in the books, but the bird is so known to hunters in the West. Can any of your boys or girls name it? [It would add very much to the instructiveness of this game to require the questioner to give a few particulars of the habits, locality, etc., of the bird whose initials he selects.—Ed.]

The Roll of Honor.

A year ago we published a series of 52 Bible Lessons averaging about 7½ verses each, or 394 verses in all. Our young readers were invited to commit them to memory, and we promised to publish in this paper the names of those whose teachers or parents should send a statement that they had learned them all, and recited them during December. Printing paper being too high to allow of a supplement, we omitted calling for the names during the last two months. But many remembered our promise, and the following 53 names have been sent in as having accomplished the task. (Many others have written that the lessons were learned, but were not repeated together, and so the names were not sent. Indeed, we have heard of hundreds who learned nearly all the lessons, and probably thousands of others have done so.) Here is the

ROLL OF HONOR.

Name.	*County.*	*State.*
Abigail V. Young	Cape May,	New-Jersey.
Alexander Thompson	Orange,	New-York.
Amanda King	Saratoga,	New-York.
Angeline Carter	Clay,	Indiana.
Anne Wade		Oregon.
Annie Emelie Cole	Bristol,	Rhode-Island.
Aristides Mills	Crawford,	Wisconsin.
Augustus Thompson Jr.	Orange,	New-York.
Bartlett C. Church	Cheshire,	New-Hampshire.
Charles C. Stuart	New-York,	New-York.
Charles E. Pinney	Addison,	Vermont.
Charles Farquhar	Address not given.	
Charlotte Goeble	Kings,	New-York.
Elizabeth C. Trott	Niagara,	New-York.
Eliza M. Sherwood	Fairfield,	Connecticut.
Eliza West		Canada West.
Emily Healy	Rock-Island,	Illinois.
Emma C. Homan	Queens,	New-York.
Emma Jane Carpenter	Queens,	New-York.
Emma Jane French	Queens,	New-York.
Ermina N. Edwards	Fairfield,	Connecticut.
Fannie Morton	Queens,	New-York.
Fannie White	Queens,	New-York.
Freddie W. Smith	New-Haven,	Connecticut.
George C. Dickerson	Kings,	New-York.
George H. Thompson	Orange,	New-York.
George Robinson	Address not given.	
Gilbert C. H. Stiles	Queens,	New-York.
Hattie M. Montgomery	Jefferson,	Wisconsin.
Irving Hoagland	Warren,	New-Jersey.
Jennie K. Cunningham	Adams,	Pennsylvania.
Jennie Buckley	Cayuga,	New-York.
John F. Bell	Kent,	Delaware.
Joseph C. Fuller	Pierce,	Wisconsin.
Lizzie S. Cunningham	Adams,	Pennsylvania.
Lucretia E. Danielson	Rockingham,	New-Hampshire.
Margaret Dickie	Perth,	Canada West.
Mary E. Lawrence	Queens,	New-York.
Mary G. Pease	St. Lawrence,	New-York.
Mary Lamb	Louisa,	Iowa.
Mary Morton	Queens,	New-York.
Robert Matthews	Randolph,	Illinois.
Russell D. Martin	Cattaraugus,	New-York.
Sarah Ford Judd	Queens,	New-York.
Sarah Jane Udall	Niagara,	New-York.
Selina J. Robinson	Address not given.	
Sophia C. Giddings	Dutchess,	New-York.
Susan Buckbee	Queens,	New-York.
Susie H. Thompson	Orange,	New-York.
Theo. I. King	Cumberland,	Maine.
Wilbur S. Edwards	Fairfield,	Connecticut.
Wm. H. Eustis	Jefferson,	New-York.
Wm. Orange Judd	Queens,	New-York.



ROBERTS.

A Remarkable Bouquet.

The above engraving looks, at first sight, simply like an ordinary bunch of violets, but those who have learned to use their eyes properly, may discover something more. In the group of flowers are contained profile likenesses of Napoleon I, his wife Maria Antoinette, and Napoleon II. To find them, examine each leaf, carefully: when once seen, they will appear so plainly, the wonder will be that they were not discovered at the first look. It is said that, after the banishment of Napoleon and the restoration of the Bourbons to the throne, it was forbidden by law to exhibit the portraits of Napoleon or his family, but an ingenious Frenchman, who loved Napoleon, devised this method of presenting the desired likenesses without much fear of detection. Thousands of them were readily sold in France.

A Musical Horse.

The Genesee Farmer gives, at considerable length, a good story of a musical horse, which we condense for the young readers of the *American Agriculturist*. The horse was named Fib. She was a powerful animal, rather lazy, and occasionally balky, for which she had been beaten and tortured many times without effect. When she chose not to go, not a step would she stir, until at last they ceased trying to conquer her with force. It was noticed that Fib worked well in clear weather, but when it was damp and oppressive, she was almost sure to balk. At last a novel way was found to start her. One hot day in harvest, when a shower was rapidly coming, the last load was on the wagon, and all was going smoothly; but about ten rods from the barn, Fib stopped short. The men were furious, and would have beaten her cruelly, but her owner stopped them, and called on the driver, who was a capital singer to strike up a tune. He immediately commenced a Methodist hymn, two lines of which had a ringing chorus.

The shower drew nearer. "Sing away," cried the owner, "sing away Hart, the old hag is relenting, I see it in her eye, and the tips of her ear are playing to your music like a lady's fingers on the guitar." Sure enough, in a moment more off she started, and the load was safely housed just as the rain commenced falling. After this a Methodist hymn would always start her, and Hart declared that Fib knew a Methodist hymn from any other, but this was merely his imagination.

The Enraged Musician.

Handel the great German Musician was a very nervous, irritable man, and like most musicians, particularly sensitive where music of his own composition was concerned. It is related that on one occasion he wished to have one of his great pieces performed in a country village, and inquired if there were any musicians to be had. A large number were recommended as particularly skillful, and he at once sent for them—"Can you read music?" asked Handel, when they were assembled. "Yes sir," "certainly," was answered from all parts of the room. "We play in the church," remarked one old gentleman who had brought his bass-viol. "Well then," said Handel, "let me hear you play that," at the same time distributing the manuscripts on which were written the musical notes. After giving them a few instructions as to their various parts, he retired to a distant corner of the room to listen to the effect. They commenced playing, but were soon puzzled, and made most outrageous discords. Handel sprang from his seat in a rage, and rushing furiously toward the frightened old gentleman with the bass-viol exclaimed: "You play in the *church*—very well, you may play in the church, for we read the Lord is long suffering, of great kindness, forgiving iniquity, transgression and sin; you shall play in the church, but you shall not play for me;" and gathering up his manuscripts he rushed furiously from the room.

Curious Sentence.

It requires no little ingenuity to make a sentence which shall be the same when read either forward or backward. There are a few such in English, but here is one from the Latin language which is ahead of any thing we have met with elsewhere, "*Sator arepo tenet opera rotas.*" The words are the same at whichever end you commence: but there is something about it more curious still. Arrange the words, one under another thus: Now the sentence reads the same S A T O R by beginning at the top of A R E P O the first column and going T E N E T downward, or by beginning O P E R A at the bottom of the last R O T A S column and reading upward. The author of this singular arrangement must have spent time enough upon it to have written at least a number of the *Agriculturist*. Who can tell what the words of the sentence mean?

A soliloquising schoolmaster, being asked why he talked so much to himself, replied: "In the first place I like to talk to a sensible man; and in the second place I like to hear a sensible man talk." Two very good reasons.

Problems and Puzzles.

No. 28. *Arithmetical Problem.*—"J. D. M.," Hudson, N. Y., contributes the following, which, though not intricate, will give good exercise in careful figuring: "In what time would a bond of $1600 be liquidated by paying $80 a year, interest being 7 per cent. per annum.

No. 29. *Cent Puzzle.*—Find on the head of a new cent, a fruit; flowers; a house of worship; an animal; a quantity of grain; and a protection against thieves.

No. 30.—*Transposition.*—O. P. Kinsley, Welland Co., C. W., asks "How to make one word out of the two words *new door*."

No. 31. *Illustrated Rebus.*—An excellent motto.

Answers to Puzzles and Problems in January No. (page 25). *Picture Puzzles*; No. 24, Fig. 1 represents an economical man, because he is trying to *make both ends meet*. No. 25, Fig. 2, represents an enterprising business firm, because both are trying *to get a-head*; it also is like a fortress, because it shows a *strong-hold*.

Riddle, No. 26: The answer is a *pen*.

Illustrated Rebus, No. 27, reads: S ten dig a in s in small t h in g s in *crease* wealth mower than watch in g and weight in g four sum great t h in g. That is: Steady gains in small things increase wealth more than watching and waiting for some great thing.

The following have sent in correct answers up to the date of January 16th; viz.: Alice P. Talbot, 29: Edmund J. Young, 21, 22, 23; Thos. S. Peck, 20, 22, 23; W. S. Van Meter, 20; Dewitt C. Challis, 20, 22, 23; "T. S." 26; "J. D. M." 20, 22, 23; H. K. Morrell, 27 (nearly); "Georgius Rex," 24, 25, 26, 27; John Tempest, 20; J. McKinstry, 27 (nearly); Elbert M. Swan, 24; Miss E. W. A., 27; C. J. Shrysburs 24, 25, 26; E. W. Jones, 27.

Seeds for Free Distribution to all Subscribers for 1863 (Vol. 22.)

See Descriptive Notes last month, page 4.

Every subscriber to the Agriculturist for **1863,** *is invited to select* **three or four parcels** *of seeds from the list below, if he can not get them conveniently otherwise.*

These seeds are all valuable. Of the **63** kinds offered, many are comparatively *new* varieties, but we include some common, useful sorts for the convenience of those without access even to common good seeds.

Most of them are annuals (reproducing seed the first season), and in all cases there will be enough to yield a supply of seed for future use. Our aim is, to furnish the *germs* of future abundance in each locality where these seeds go.

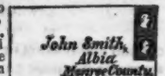
Many of these seeds were grown by ourselves, the past year; the others are obtained of the best growers. The distribution will begin in February.

Mode of Distribution.—The seeds may be called for at the office, after March 1., or be applied for by mail at any time now, to be forwarded as soon as ready. The postage is **only 1 cent per ounce under 1500 miles; and 2 cents per ounce when over 1500 miles.**

Those sending for seeds to be forwarded by mail, will please *carefully* observe the following

DIRECTIONS—(1) Select from the list below, any *three* or *four* parcels desired, and write *plainly* on a slip of paper the *numbers* (only) of the kinds of seeds wanted. (These numbers are used on our seed drawers, seed bags, etc.)

(2) Enclose the slip in a prepared envelope—directed in full to *your own address* (not John Smith's), and put on it postage stamps to the amount of **one cent** *for* **each ounce** *of seeds to be enclosed,* if to go **under 1500 miles,** *or* **two cents** if to go **over 1500 miles.** (Most places West of the Mississippi river are over 1500 miles.) **N.B.**—The total amount of stamps required can be reckoned from the table of seeds below. Any fraction over even ounces will need an extra 1-c. or two 1-cent stamps according to distance. Forward the above prepared envelopes to this office, in a letter, and the seeds will be enclosed according to the numbers on the slip. To save postage, let there be *no marks on the envelopes* except the address and stamps. About 2 ounces will go in a common sized envelope.



Field, and Vegetable Garden Seeds.

No. Weight of package.

101—Mammoth M llet.....About one-half ounce.
141—Darling's Early Sweet Corn.....About one ounce.
186—Stowell's Evergreen Sweet Corn.....About one ounce.
187—Conn. Broad Leaf Tobacco. Less than one-eighth ounce.
188—Genuine Havana Tobacco. Less than one-eighth ounce.
8—Daniel O'Rourke Pea.....About one ounce.
9—Champion of England Pea.....About one ounce.
12—Green Kohl Rabi.....About one-fourth ounce.
145—Flat Dutch (Winter) Cabbage. About one-fourth ounce.
218—Early Sugar Loaf Cabbage.....About one-fourth ounce.
199—Red Dutch Cabbage.....About one-fourth ounce.
64—Extra early Round Turnip Radish; one-fourth ounce.
19—Round Spinach.....About one-half ounce.
147—Neapolitan Cabbage Lettuce. About one-fourth ounce.
101—Improved Long Orange Carrot. About one-half ounce.
149—Extra early Bassano Beet.....About one-half ounce.
193—Hubbard Squash, pure.....About one-fourth ounce.
153—Fejee & Italian Red Tomato. About one-eighth ounce.
154—Ice Cream Water Melon.....About one-eighth ounce.
217—Fine Nutmeg Melon.....About one-eighth ounce.
194—Hollow Crown Parsnip.....About one-fourth ounce.
159—Fine Large Cheese Pumpkin. About one-fourth ounce.
17—Red Strap-Leaf Turnip.....About one-fourth ounce.
193—Early Short Horn Carrot.....About one-fourth ounce.
196—Green Curled Kale.....About one-fourth ounce.
198—Improved Purple Egg Plant. About one-eighth ounce.
197—Linnæus Rhubarb.....About one-half ounce.

Flower and Ornamental Seeds.

89—Cotton Plant (2 kinds, mixed).....One-half ounce.
111—Castor Oil Bean.....One-half ounce.

On an average any **five** *of the following varieties will go under one* 1-*cent stamp,* (or *two stamps* if over 1500 miles.)

200—Fancy Gourds, (mixed varieties) *(ha)*
23—Mignonette, *(ha)*
30—Tassel Flower, *(ha)*
31—Chinese Pink, *(ha)*
37—Beautiful Zinnias, (Mixed) *(ha)*
49—Candytuft, *(ha)*
51—Drummond's Phlox *(ha)*
123—Gilia nivalis, *(ha)*
134—Whitlavia, *(ha)*
136—Long tubed Centranthus, *(ha)*
164—Sweet-scented Ageratum, *(ha)*
169—Clarkia pulchella, *(ha)*
173—Mixed Larkspur, *(ha)*
177—Graceful Quaking Grass, *(ha)*
182—Sweet Alyssum, *(ha)*
183—Fine Mixed German Asters, *(ha)*
203—Mixed G'n Poppy, *(ha)*
204—Mixed Fr'h Poppy *(ha)*
205—Double French Marigold, *(ha)*
206—Golden Straw Flower, (everlasting) *(ha)*
210—Convolvulus minor, *(ha)*
212—Fine Sweet Peas, *(ha)*
219—Martynia *in var.* *(ha)*
220—Perilla Nankinensis *(ha)*
221—Striped Mirabilis *(ha).*
27—Cockscomb, *(ta)*
222—Convolvulus variegatus, *(ta)*
216—Acroclinium roseum, *(hha)*
122—Mixed Canterbury Bells, *(hb)*
170—Evening Primrose, *(hb)*
43—Foxglove, *(hp)*
209—Dw'f Blue Larkspur, *(hp)*
223—Mourning Bride, *(hp)*

* *(ha,)* hardy annual; *(hha,)* half hardy annual; *(ta,)* tender annual; *(hha,)* half hardy biennial; *(tb,)* tender biennial; *(hp,)* hardy perennial; *(hhp,)* half hardy perennial; *(tp,)* tender perennial.

☞ **Special to Canada Subscribers.**—Owing to the fact that *some* Postmasters in the British Provinces insist upon collecting 30 cents an ounce on Seeds and Plants, prepaid here at the U. S. rates, it is hardly safe to send for seeds not worth that cost. Those living near the lines can usually have them mailed to some U. S. Post Office, where they can get them by private hands. Where clubs of considerable size are formed, it will pay to have seeds for all come together in a parcel by express.

New York Live Stock Trade for 1862.

The Live Stock Markets of New York city are by far the largest in this country. The importance of these markets is indicated by the fact that during last year, nearly *two millions* of live animals were brought here for slaughter. At the Forty-fourth street or Washington Yards alone, more than *two hundred thousand* (200,000) *beef cattle* were received and sold. The principal transactions are confined to a few points. *Beef cattle* are sold mainly at the Washington yards, kept by A. M. Allerton. These occupy the squares bounded east by Fourth avenue; west by Fifth avenue; south by Forty-third street; and north by Forty-sixth street. Lesser numbers are sold at Browning's and O'Brien's, on Sixth street, near Third avenue; at Chamberlin's on Robinson street, (nearly west of our office); and over the Hudson river at the Bergen yards, near the old terminus of the Erie Railroad.....Milch cows, sheep, and veal calves are sold at all the four city markets. Hogs are mainly sold at West Fortieth street near the Hudson River.

At present the principal weekly market day for beef cattle is on Monday; the sales, however, are continued into Tuesday, the yards being generally cleaned out at about the middle of the afternoon of that day. Veal calves are mainly sold on Wednesdays. Cows, sheep, and live hogs are sold on all days, the largest transactions being on the first two days of the week, especially for sheep. A careful reporter, of long experience, from the office of the *American Agriculturist*, is always present at these sales, and with proper assistants, gathers up all items of interest, the number and derivation of the cattle, the number of other animals in, the prices realized, notes upon sales, etc., etc. These are furnished to some of the journals regularly, including the Daily, Semi-weekly, and Weekly Times, and the Methodist, and we also publish a condensed report for this Journal. Below is a summary for the past year, which will be found interesting, and useful for reference. Many of these figures we have already furnished to other journals.

WEEKLY AND TOTAL RECEIPTS FOR **1862.**

Week ending	Beef Cattle.	Net price.	Milch Cows.	Veal Calves	Sheep, Lambs.	Live Hogs.	Total all kds.
Jan. 7	4044	8	133	512	7,678	42,888	55,055
Jan 14	3668	7¾	123	514	8,593	46,713	59,411
Jan. 21	4392	7¾	94	362	9,623	30,037	44,508
Jan. 28	2384	8	46	228	7,106	24,590	34,354
Feb. 4	4733	8	90	846	8,717	27,820	39,706
Feb. 11	3090	8¼	117	314	9,383	12,919	25,823
Feb. 18	3894	8	119	313	8,270	16,080	28,676
Feb. 25	3529	8¼	116	301	4,760	9,188	17,894
Mar. 4	3965	8	135	335	6,695	17,395	28,525
Mar. 11	4414	7¾	121	592	6,262	14,011	25,900
Mar. 18	3537	7¾	156	553	4,695	15,173	24,103
Mar. 25	3299	8¼	155	551	2,978	13,492	20,475
April 1	3477	8	167	694	5,393	11,631	20,642
April 8	4001	8	109	855	4,717	12,333	22,006
April 15	3317	8¼	127	991	6,170	9,623	20,428
April 22	3059	7¾	98	916	6,597	13,291	23,961
April 29	3923	8	129	1070	5,124	13,567	23,813
May 6	4116	8¼	115	968	5,074	9,964	20,257
May 13	4778	7¾	104	769	5,874	11,147	22,672
May 20	3393	8¼	98	1025	7,006	7,713	19,235
May 27	5362	8	119	957	6,712	8,344	21,394
June 3	3564	8¼	106	537	6,947	10,873	23,427
June 10	4426	8¼	101	538	7,906	11,660	24,596
June 17	4485	8	115	757	8,639	11,263	25,259
June 24	4427	8¼	92	489	8,376	6,408	19,792
July 1	5187	7¾	140	788	11,778	13,918	31,781
July 8	4349	7½	113	503	9,796	9,562	24,223
July 15	3532	7¾	97	600	9,592	5,871	19,712
July 22	5582	7½	104	577	11,302	11,142	28,707
July 29	3887	7½	90	593	12,725	10,280	27,485
Aug. 5	4629	7¼	62	547	9,472	11,294	26,004
Aug. 12	4448	7	94	576	11,124	14,814	31,056
Aug. 19	4130	7½	70	350	112,54	12,663	28,467
Aug. 26	5022	7¾	87	487	12,870	15,197	33,172
Sept. 2	4698	7¾	78	441	13,546	14,210	32,973
Sept. 9	5269	7¼	80	525	15,733	14,204	35,830
Sept. 16	6410	7¼	59	803	15,734	16,479	39,476
Sept. 23	4890	7¼	83	473	14,030	21,316	40,792
Sept. 30	5245	7¼	94	660	12,191	21,252	37,442
Oct. 7	5133	7½	96	499	12,546	28,906	42,180
Oct. 14	5346	7½	100	746	18,931	29,534	49,657
Oct. 21	5447	7½	88	750	14,528	23,825	44,636
Oct. 28	5090	7¾	82	717	18,215	29,599	48,978
Nov. 4	5567	7¼	105	707	8,973	31,672	47,084
Nov. 11	5330	7½	107	794	12,466	40,662	59,359
Nov. 18	5723	7¼	93	835	10,085	34,488	51,244
Nov. 25	5461	7	62	576	10,116	32,671	43,886
Dec. 2	4266	7¾	86	420	10,421	62,636	67,829
Dec. 9	5265	8	64	318	10,749	49,580	66,076
Dec. 16	6276	7½	69	406	8,871	53,778	69,400
Dec. 23	5012	7½	63	433	7,924	35,154	48,586
Dec. 30	4809	7¾	129	392	4,957	62,165	71,443
Totals.	235,660	—	5,233	30,238	475,722	1,098,712	1,845,605
Weely av.	4532	7¾	101	582	9,149	221,129	35,492

TOTAL RECEIPTS OF LIVE ANIMALS FOR 3 YEARS.

	Beef Cattle.	Cows.	Veal Calves.	Sheep.	Hogs.	All Kinds.
1862	235,660	5233	30,238	475,722	1 098,712	1,845,605
1861	226,023	5816	35,388	527,358	598,509	1,387,327
1860	236,747	7154	40,162	514,191	319,628	1,107 882

AVERAGE WEEKLY RECEIPTS FOR 3 YEARS.

	Beef Cattle.	Cows.	Veal Calves.	Sheep.	Hogs.	All Kinds
1862	4532	101	582	9149	21,129	35,492
1861	4265	110	650	9950	11,302	26,176
1860	4360	138	772	9888	6,147	21,305

AVERAGE PRICE PER. LB. FOR THE NET OR ESTIMATED DRESSED WEIGHT OF ALL THE BEEF CATTLE SOLD.

1862.....7½ | 1861.....7 4-5c. | 1860.....8 1-5c.

The Supply and Prices.

BEEF CATTLE have run remarkably uniform during three years past. The *receipts* averaged 4360; then 4265, and last year, 4532 per week. The total receipts, however, were about 10,000 head more last year than in any previous year. The details in the table above, indicate the variations from week to week, and at different seasons, as well as the effect upon prices, of a larger or smaller supply.—*The Prices* have varied from 7c. to 8¼ cents per pound, for the estimated weight of dressed carcasses. This is the average of all sales in every week. The range has been from 4¾c. to 11c. for the different grades. It will be noticed that for exactly the first half of the year, the average weekly rates were nearly always at 8c. or above; while for the second half they were always *below* 8c., except one week. The average of the weekly averages is 7¾ cents. As larger numbers were sold at the lower rates, the average of all the cattle sold has been at about 7 cents and 6 mills. Owing to the short, dry pastures last Summer, in many localities, and to the general advance in other commodities, it is believed that higher prices will prevail during 1863.

MILCH COWS.—The *receipts* for 1862 were considerably less than during the previous two years, and until just at the close, the prices rated very low. The stringent laws against swill milk from distilleries, and the increased facilities for bringing milk from the country, have lessened the demand for cows at the city markets.

VEAL CALVES.—The number received in 1862, was smaller than for the two previous years. The prices ranged fully as high as in 1861.

SHEEP.—The receipts of sheep and lambs for 1862 were 51,636 head less than in 1861, and the markets have generally been unsupplied. This has resulted from the high price of wool, and the consequent increased attention to wool growing. Both mutton and pelts have been much higher than previously. Sheep for slaughter, and for farm purposes, are probably higher now than ever before.

LIVE HOGS.—These have come to this market for a year past, in numbers beyond all precedent. The closing of the Mississippi, the trouble in the southwestern borders of the great corn producing regions, and the scarcity of barrel makers at the West, have caused a large shipment of live hogs to this market. The receipts for 1862 reached **1,098,712.** Prices ruled very low during most of 1862, and until the cool packing weather came on.

ALL KINDS.—The total number of animals of all kinds received in this city at the regular yards during 1862, reached the enormous figures of **1,845,605,** or an average for each week of **35,492.**

Derivation of the Beef Cattle.

Of the 235,660 Beef Cattle brought here last year, 211,060 were yarded at the great 44th-street markets, and of these our reporters have gathered the origin so far as could be learned from personal inquiry among the drovers, and from the yard books. The following table shows where the cattle came from.

From	No. of Head.	From	No. of Head.
Illinois	103,729	Missouri	1,711
New-York	35,640	Pennsylvania	1,585
Ohio	19,705	Connecticut	589
Indiana	15,840	Canada	505
Kentucky	9,571	New-Jersey	427
Michigan	7,346	Virginia	117
Iowa	3,698		

It is noteworthy that of the 211,060 cattle at Forty-fourth street, 103,729, or nearly *one half*, are credited directly to the single State of Illinois! But more than this: of the 35,640 credited to New-York State, for example, a large proportion were raised and fed at the West, very many of them in Illinois, and brought on to be pastured awhile at the East. We may safely estimate, therefore, that to the single grazing and corn-growing State of Illinois, we are indebted for much more than half of the *one hundred and sixty-five billion pounds of beef* brought to New-York *during the year* 1862!

RAILROADS AND LIVE STOCK.—The following table shows the routes by which the cattle yarded at Forty-fourth street have arrived here:

Hudson River R. R.	78,283	Camden & Amboy R.R.	1,844
Erie Railroad	68,782	Hudson River Boats	6,829
Harlem Railroad	43,996	On Foot	6,251
N. J. Central R. R.	11,728	New-Haven R. R.	148

The importance of our great railroads is illustrated by the receipts of Western stock, which form but a small item in their freight business. To say nothing of the million hogs and the half million sheep brought in mainly by railroad, at least 200,000 cattle have come in by cars. The curious in figures may estimate how long a line of cattle would be formed, were these cattle to be all driven here from the West, in one continuous drove: how many drovers would be required, how much feed on the way; how much the cattle would depreciate, etc., etc

Market Review, Prices, Weather, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Monday Morning, Jan. 19, 1863.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
24 days *this* m'th	317,000	739,000	875,000	6,500	141,500	351,000
24 days *last* m'th	667,000	3,954,000	2,787,000	6,850	295,000	869,000

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
24 days *this* month	224,000	2,778,000	2,212,000	14,650	188,000
24 days *last* month,	418,000	3,605,000	3,216,000	53,250	312,000

2. *Comparison with same time last year.*

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
24 days 1863	317,000	739,000	875,000	6,500	141,500	351,000
25 days 1862	272,000	61,500	45,200	22,550	63,000	128,150

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
24 days 1863	224,000	2,778,000	2,212,000	14,650	188,000
25 days 1862	592,100	1,116,000	1,205,450	145,400	138,700

3. *Receipts in New-York during each of four years past.*

	Flour. Bbls.	Wheat. Bush.	Corn. Bush.	Rye. Bush.	Barley. Bush.	Oats. Bush.
1862	5,757,608	27,079,259	17,290,234	932,084	1,151,818	5,051,874
1861	4,968,971	23,429,135	21,120,242	765,665	1,854,304	4,852,009
1860	3,381,420	17,072,790	14,709,962	396,008	1,251,007	4,683,856
1859	3,191,822	8,818,092	3,063,622	334,491	1,527,400	4,226,920

4. *Exports from New-York during each of four years past.*

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1862	2,961,518	25,564,755	12,030,848	1,104,549	42,061	210,669
1861	3,110,346	28,993,314	12,889,850	1,000,405	8,927	160,325
1860	1,926,202	13,538,039	4,085,082	450	8,280	103,076
1859	938,516	297,587	497,886	——	6,550	2,568

5. *Stock of Flour in New-York City, January* 1.

	1860.	1861.	1863.	1863.
Western Canal Flour, bbls	681,876	569,800	447,056	721,383
Canadian Flour, bbls	17,150	10,200	11,100	2,405
Southern Flour, bbls	228,503	91,998	36,956	28,500
Total	927,529	671,998	495,112	752,288

6. *Stock of Grain in New-York, January* 1.

	1860.	1861.	1862.	1863.
Wheat, bushels	1,915,388	8,535,741	2,046,052	4,734,817
Corn, bushels	79,400	2,712,000	5,575,911	4,223,013
Rye, bushels	30,500	26,400	58,500	33,270
Barley, bushels	868,795	169,574	435,472	99,835
Oats, bushels	1,576,100	494,790	774,575	531,312

7. *Exports of Breadstuffs from New-York, Jan.* 1, *to Jan.* 15.

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1863	99,957	435,919	152,152	4,744	——	——
1862	156,555	842,096	522,334	67,286	——	1,002

8. *Receipts of Breadstuffs at Chicago for four years.*

	1859.	1860.	1861.	1862.
Wheat, bushels	8,184,746	14,568,429	17,539,909	13,137,533
Corn, bushels	5,410,003	15,487,966	26,543,283	31,145,721
Oats, bushels	1,813,048	2,029,906	1,883,238	3,782,422
Rye, bushels	228,179	295,436	479,003	976,752
Barley, bushels	662,187	623,005	417,129	800,476
Total	16,298,163	33,004,746	46,862,534	49,842,904
Flour into wheat	3,710,060	3,500,030	7,230,685	8,776,290
Total	20,008,223	36,505,772	51,093,219	58,619,194

9. *Breadstuffs at Chicago at the close of each of four years.*

	1862.	1861.	1860.	1859.
Flour, bbls	50,750	28,988	31,745	16,358
Wheat, bushels	935,961	1,183,902	871,537	283,552
Corn, bushels	1,086,979	1,568,586	178,104	20,583

10. *Exports of Breadstuffs from Philadelphia.*

	Flour, bbls.	Wheat, bush.	Corn, bush.	C.Meal, bbls.
Total, 1862	464,291	946,673	778,525	50,149
Total, 1861	362,552	2,054,988	893,235	31,672
Total, 1860	295,137	811,961	390,389	49,357
Total, 1859	172,944	54,484	151,015	44,464
Total, 1858	219,871	88,190	468,181	39,773
Total, 1857	198,867	190,400	625,526	48,572

11. *Stock of Breadstuffs on hand in Philadelphia, at the close of each of the last eleven years.*

	Flour, bbls.	Wheat, bush.	C.Meal, bbls.	RyeFlour bbls.
Dec. 23, 1862	102,800	167,800	1,600	1,455
Dec. 27, 1861	143,100	176,500	1,324	2,231
Dec. 31, 1860	123,200	115,800	7,834	650
Dec. 31, 1859	117,900	152,500	2,577	987
Dec. 30, 1858	130,700	85,900	3,378	1,965
Dec. 31, 1857	40,100	107,200	1,773	1,091
Dec. 24, 1856	58,000	98,500	18,500	920
Dec. 20, 1855	91,500	121,500	9,350	2,952
Dec. 18, 1854	10,500	48,000	3,535	1,952
Dec. 23, 1853	92,800	106,500	10,325	2,514
Dec. 25, 1852	80,300	125,800	1,450	308

12. *Receipt of Breadstuffs in Boston.*

	1862.	1861.
Flour, barrels	1,362,940	1,429,697
Flour, half barrels	5,785	8,603
Corn, bushels	1,889,021	1,979,925
Corn, sacks	.....	1,191
Wheat, bushels	63,015	23,388
Oats, bushels	1,168,991	1,047,345
Rye, bushels	39,973	83,156
Shorts, bushels	283,136	515,883
Rye Flour, barrels	1,867	985
Corn Meal, barrels	13,500	14,711

We present above very carefully and laboriously prepared statistics of the trade in breadstuffs during **1862**, with comparisons for the two preceding years, also comparative statements of the receipts, sales, and exports for the month ending to day, which included but twenty four business days, omitting Christmas and New Year's.

It will be seen (table 3) that the *Receipts* of flour at New-York City in 1862 exceeded those of 1861 by 788,637 barrels, which is equivalent to 3,943,185 (or nearly four million) bushels of wheat. The receipts of wheat in the same time decreased 1,349,875 bushels, which still left an excess for 1862, of 2,593,309 bushels over the previous year.

The receipts of wheat at Chicago (table 7) last year fell off from those of 1861 by 4,402,376 bushels. This was partly counterbalanced by an excess in flour equivalent to 1,545,605 bushels, but still leaving a decline of 2,856,771 bushels in 1862.

The exports from New-York, (table 4) in 1862 as compared with 1861, show a decrease of 148,828 barrels of flour, and 3,333,559 bushels of wheat, or reducing flour to wheat, a decrease of 3,977,699 bushels of wheat.

The Stocks of Flour and Wheat on hand in New-York, (tables 5 and 6) are considerably larger Jan. 1st, 1863 at the same date, than in any of the preceding three years.

Similar comparisons may be made with respect to Corn, Rye, etc., but all the tables are so arranged as to show at a glance the condition of the breadstuff trade, and we hardly need repeat the items further.

During the past month, the breadstuff trade has been almost wholly governed by the rise and fall in gold, the higher currency rates in gold increasing the value of flour and grain for export. As shown in the table of "Current Wholesale Prices," the closing prices are considerably above the quotations in our last report (Dec. 18.). Holders are now quite firm, under the expectation of further advance. This will depend wholly upon the price of gold. Any financial schemes or changes reducing the relative values of gold and currency, will have a corresponding effect upon breadstuffs, so far as the latter are not influenced by other circumstances—foreign demand, etc... Provisions, especially hog products, have been in brisk demand, partly for export, and have advanced in price... Cotton, Wool, Hay, Hops, and Tobacco, have been more freely purchased at buoyant prices.....Heavier sales of other articles of general merchandise have also been effected. The table of Prices will show both present values and changes since last month.

CURRENT WHOLESALE PRICES.

	Dec. 18.	Jan. 19.
FLOUR—Super to Extra State	$5 80 @ 6 40	$6 20 @ 7 00
Superfine Western	5 80 @ 6 05	6 30 @ 6 60
Extra Western	6 15 @10 00	6 75 @10 00
Extra Genesee	6 50 @ 8 50	7 05 @ 8 50
Super. to Extra Southern	6 80 @10 00	7 65 @10 00
RYE FLOUR—Fine and Super.	4 00 @ 5 65	3 50 @ 5 25
CORN MEAL	3 80 @ 4 50	3 95 @ 4 60
WHEAT—All kinds of White	1 50 @ 1 65	1 58 @ 1 75
All kinds of Red	1 22 @ 1 47	1 30 @ 1 58½
CORN—Yellow	80 @	85 @ 87
White	85 @	85 @ 93
Mixed	75 @ 77	83 @ 85
OATS—Western	68 @ 70	72 @ 74
State	69 @ 70	73 @ 74½
RYE	83 @ 97	90 @ 1 02½
BARLEY	1 25 @ 1 45	1 40 @ 1 55
BEANS—Medium and Pea, bu.	2 35 @ 2 75	2 25 @ 2 50
Marrow and Kidney	2 50 @ 3 00	2 50 @ 2 75
HAY, in bales, per 100 lbs	75 @ 90	90 @ 1 10
COTTON—Middlings, per lb	66 @	72½ @ 73
RICE, per 100 lbs	6 75 @ 9 00	Nominal.
HOPS, crop of 1862, per lb	17 @ 25	17 @ 25
FEATHERS, Live Geese, p. lb.	43 @ 45	Nominal.
SEED—Clover, per lb	10¼@ 10¾	10¾@ 11¾
Timothy, per bushel	2 25 @ 2 37½	2 25 @
FLAX, per bushel		2 80 @ 3 00
SUGAR—Brown, per lb	8 @ 11¼	8½@ 12½
MOLASSES, New-Orleans, p.gl.	32 @ 40	32 @ 56
COFFEE, Rio, per lb	28 @ 32	28½@ 31¾
TOBACCO—Kentucky, &c.p.lb.	13½@ 30	14 @ 32
Seed Leaf, per lb	9 @ 30	10 @ 35
WOOL—Domestic fleece, p. lb.	58 @ 65	58 @ 66
Domestic, pulled, per lb	48 @ 62	56 @ 65
TALLOW, per lb	10½@ 10¾	11 @ 11½
OIL CAKE, per ton	43 00 @51 00	Nominal.
PORK—Mess, per bbl	14 00 @14 12½	14 62½@14 75
Prime, per bbl	11 62½@ 11	11 25 @12 50
BEEF—Plain mess	11 75 @13 00	11 25 @12 75
LARD, in bbls., per lb	9¼@ 10	10 @ 10¾
BUTTER—Western, per lb	16 @ 20	16 @ 20
State, per lb	21 @ 26	20 @ 26
CHEESE	9 @ 13	9 @ 13
Broom Corn—per lb	7 @ 8	7 @ 8
EGGS—Fresh, per dozen	22 @ 24	22 @ 24
Limed, per doz	15 @ 16	15 @ 16
POULTRY—Fowls, per lb	8 @ 9	10 @ 11
Ducks, per lb	10 @ 11	11 @ 12
Geese, per lb	7 @ 9	7 @ 9
Turkeys, per lb	10 @ 12	11 @ 14
VENISON, per lb	10 @ 11	8 @ 18
POTATOES—Common, p. bbl.	1 50 @ 1 75	1 25 @ 1 75
Buckeyes, per bbl	1 50 @ 1 75	1 25 @ 1 75
Peach Blow, per bbl	1 99 @ 2 00	2 00 @ 2 25
Mercers, per bbl	1 75 @ 2 50	2 50 @ 3 00
Sweet Delawares, per bbl	2 50 @ 3 00	3 00 @ 3 50
Sweet Jerseys, per bbl	2 00 @ 2 25	2 50 @ 3 00
ONIONS, Red & Yellow p. bbl.	2 25 @ 2 50	2 50 @ 3 50
White, per bbl	2 50 @ 2 75	2 50 @ 3 50
TURNIPS—Rutabagas, p. bbl.	1 00 @	75 @ 87
CABBAGES, per 100	3 00 @ 5 00	3 00 @
APPLES, Western, per bbl	1 62 @ 1 87	1 25 @ 1 50
Apples, choice, per bbl	2 50 @ 3 00	2 00 @ 5 00
CRANBERRIES, Cape Cod, p.b'l	11 00 @13 00	10 00 @14 00
Western, per bbl	7 00 @ 9 00	8 00 @ 9 00
DRIED APPLES, per lb	4 @ 6	4 @ 5
DRIED PLUMS, per lb	12 @ 14	10 @ 11
DRIED PEACHES, per lb	16 @ 18	13 @ 15
HICKORY NUTS, per bushel	1 75 @ 2 50	1 75 @ 2 00
CHESTNUTS, per bushel	4 50 @ 5 00	5 00 @

N. Y. Live Stock Markets.

—THE CATTLE MARKETS have not been so well supplied during the past month as previously, the average being only 4,506 per week, or less than for any previous month since August, but larger than usual. Prices have advanced ½ c. during the past two weeks. This week's averages are not yet made up; at the last general market, Jan. 13th, with 4663 head offered, a few extra fat cattle brought prices equivalent to 11 c. @ 11½c. per lb. for the dressed quarters; prime steers 9½c. @ 10c.; fair beeves 8¼c., poor 6½c. @ 7½c., average of all sales 8c. Cattle are now selling well, with a prospect of good prices during the Winter.

Veal Calves.—Receipts have averaged 370 per week since our last report. They sell readily, a few choice ones at 3½c. per lb. live weight, but mostly at 6c. for good veals, and 5c. @ 5½c. for ordinary to fair calves.

Sheep and Lambs.—Receipts are falling off rapidly. The average weekly receipts have been only 6,301 during the past month, against over 10,000 for the preceding 4 weeks. Farmers and graziers are holding them back on account of the high prices of wool which make sheep raising one of the most profitable operations of the farm. Skins alone are worth $2.37 @ $2.50 in lots, while large selected pelts sometimes sell for $3.00 each. The short supply in market has caused a rise in the price of sheep equal to 1c. per lb. Good sheep that will weigh 100 lbs. alive, are worth $6¼ @ $6¾ each. A mixed lot of 1000 head averaged $6.55. Ordinary sheep sell at prices equivalent to 5½c. @ 6c. per lb. live weight.

Live Hogs—Receipts have averaged 44,120 per week, which is nearly equal to last month. For the week ending Dec. 30, no less than **61,165** live and several thousand dead hogs were received in the city and completely glutted the market, carrying prices down to 4½c. per lb., live weight, for prime corn-fed hogs. Prices have since recovered ¼c. being now 5c, @ 5¼ c. for fat corn-fed, 4¾c. for medium, and 3¾c. @ 4c. for distillery-fed hogs. Western mast, or nut fed hogs are worth only 3c. @ 3½ c., being disliked by packers. The average weekly receipts of hogs last year was 21,129 against 11,292 for the year 1861.

The Weather has been remarkable for the season of the year. We have had very few cold days, and not over an inch of snow. The ground has been open most of the time, and farming operations have been carried on to an unusual extent. Fears are entertained that the warm weather followed by sudden freezings without the protection of a snowy covering, has injured the winter wheat and rye.——OUR DAILY NOTES condensed, read: *December* 20, clear, cool, the thermometer at 9° in the evening and 4° the morning of the 21st, which was a clear day, with a light snow fall at night.—22 cloudy, cool—23, 24, clear, mild—25, cloudy—26, cloudy, light rain at night—27, 28, 29, clear, warm—30, clear A. M., cloudy P. M., rain and snow at night—31, N.E. snow storm, mingled with rain, 1 inch snow remained on the ground——*January* 1, 2, 3, clear and moderating—snow gone—4, fog A. M., clear P. M.—5, clear, warm—6, fog, rain at night—7, cooler with snow squalls—8, clear, fine—9, cloudy—10, N.E. rain, and at night—11, 12 clear mild—13, cloudy—14, heavy rain at night—15, N.E. rain and heavy fog—16, continued rain—17, 18, 19, clear, cold.

The Rain Fall and melted snow, for month ending Jan. 15, amounts to 3.11 inches. The rise and fall of the Barometer has made a crooked path on our recording paper during the month. The range has been from 29.18 to 30.50 inches, rising and falling rapidly, in some cases over an inch in 24 hours.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

DECEMBER.											
1	47r	8	18	15	46	22	25s	29	35
2	37	9	26	16	58	23	32	30	40r
3	30	10	26	17	32	24	25	31	34s
4	29	11	34	18	28	25	26		
5	34s	12	38	19	26	26	46r	Avg'e	32°
6	30	13	37r	20	10	27	46		
7	14	14	40	21	7	28	54		

JANUARY.									
1	22	4	26	7	30	10	34r	13	31
2	26	5	27	8	21	11	34r	14	40r
3	28	6	35r	9	28	12	32	15	50r

Business Notices.

☞ *Eighty Cents a Line of space.*

Best and Cheapest Fertilizer of the Age,
EXCELSIOR POUDRETTE.
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Send for our Annual Circular, giving prices, particulars, certificates, &c. "*Trade supplied.*"

Lands—To All Wanting Farms.

Large and thriving settlement of Vineland, mild climate, 30 miles south of Philadelphia, by railroad; rich soil; fine crops; twenty acre tracts, at from $15 to $20 per acre; payable within four years. Good business openings; good society. Hundreds are settling and making improvements. Apply to CHAS. K. LANDIS, Postmaster, Vineland, Cumberland County, N. J. Letters answered. Papers, containing full information, sent free.

☞ **Republished with Changes.** ☜

PREMIUM LIST,

For 1863---Volume XXII.

Good Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the American Agriculturist.

(Premiums open to all who Desire them.)

N. B —*The great advance in the cost of some of the Articles offered in our Premium List, renders it necessary to republish the list with the needed changes. For some of the articles we now pay half as much again as we did when the list was first made out for this year. When asked to do so, we adhere to the terms offered in the January number, up to February 1st, after which the terms will be as named below. It will be seen that we have not raised the number of names required proportionally, as much as the increased cost of the articles would really demand. The following terms will hold good until March 1st, when other changes will be announced* IF *the exigencies of the times demand it, but we hope not to be obliged to make any change.*

Every subscriber is invited to renew his own subscription, and to solicit others to subscribe. But to all those who will take the trouble to collect and forward CLUBS of subscribers, we offer a remuneration in the form of *first-rate* articles, as named below. (The pay thus offered is much larger than we could give in cash, as we get these articles on extra good terms *when for premiums.*)

☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ *We make no distinction between new and old subscribers* in giving these premiums, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ Every person collecting names for premiums, should send two copies of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; Two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender. The premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

☞ Clubs need not be all confined to one Post Office.

Table of Premiums for 1863.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cts. each
1—GOOD BOOKS—*See terms below*			
2—Best Family Clothes Wringer	$7 50	19	40
3—Nonpareil Washing Machine	$16 00	35	75
4—Sewing Machine, (Wheeler & Wilson)	$45 00	90	130
5—Sewing Machine, (Wilcox & Gibbs)	$35 00	69	98
6—Aneroid Barometer	$7 50	20	46
7—The Aquarius	$10 00	22	47
8—Five Octave Melodeon (best)	$75 00	125	257
9—4½ Octave Melodeon (best)	$50 00	104	182
10—Four Octave Melodeon (best)	$45 00	90	130
12—Worcester's *Unabridged* Dictionary	$8 50	25	53
13—Six back Volumes Agriculturist	$6 72	19	35
14—Five do do do	$5 60	16	30
15—Four do do do	$4 48	13	26
16—Three do do do	$3 36	10	20
17—Two do do do	$2 24	..	15
18—One do do do	$1 12	..	10
19—Jacob's Portfolio Paper File	$1 48	..	14
20—Windsor & Newton's Paints	$3 50	15	29
21—Osborn & Hodgkinson's Paints	$1 50	..	15
22—Premium Cylinder Plow	$10 00	32	70
23—Eagle Plow No. 20	$9 25	30	65
24—Hay and Straw Cutter (best)	$9 00	27	63
25—Steel-tooth Cultivator (best)	$7 50	25	55
26—Family Lard and Wine Press	$7 00	24	53

Post-paid.

DESCRIPTION OF THE PREMIUMS.

Premium No. 1—Good Books.

Any person sending **16** or more subscribers, may select from our book list, (page 61,) to the amount of 12½ *cents for each name, at the club price of* 80 *cents, or to the amount of* 33½ *cents for each name, at* $1 *each.* Farmers' Clubs have frequently joined together and obtained a good library through these premiums. N. B.—The books will be *delivered* to the recipients, (by mail or express,) *free of all cost.*

☞ See the List for any changes in Price.

No. 2—Family Clothes-Wringer.

This is a first-rate household implement—a great saver of garments, and of hard work. With this machine set on the edge of the wash-tub, the garments are easily and rapidly passed between two India-rubber rollers, the water falling back into the tub, and the garments dropping into a basket, in a drier condition than they can be wrung by hand, and therefore more quickly dried on the line. A child can in a few minutes wring out a tubful of clothes. We have had one in constant use in our family for nearly three years, and it is still as good as new. The machine offered, No. **2**, is just the thing for family use. It is provided with cogs to move the rollers together, so that it is not possible to tear garments, as is the case with cheaper Wringers not provided with cogs. We present one of these No. **2** Wringers to any person procuring and forwarding **19** subscribers, at $1 each, or **42** at the lowest club price, (80 cents each.)

Premium No. 3—Washing Machine.

The **Nonpareil Washing Machine** we have had in use in our family for nearly a year past, and it has not only driven out half-a-dozen placed there on trial, but has really given excellent satisfaction. It is the only machine, out of twenty we have tried, which the "help" cheerfully use without compulsion. It is a labor-saver and a clothes-saver—two important considerations. (See descriptive cut, and advertisement on page 31.) The clothes are put in, in quantity, and quickly washed by simply turning a crank. The balance-wheel adjusts the force required, so as to make the turning easy. Take it all in all, it is the best Washing Machine we know of, and is worthy of a place in every family. They are of three sizes; we select No. **2**, as the best size for common family use. The price of No. **2** is $16. This machine we will present to any one forwarding **35** subscribers at the regular price, ($1 each,) or **75** subscribers at the lowest club price, (80 cents.) The machine can be sent to any point as freight, or by express, and will be forwarded, free of all expense, except the freight after leaving the city

Premium No. 4—Sewing Machine.

99 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *five* years' use in our own family, in connection with other machines. We want no better. The terms on which it is offered above, will enable many families to secure one without direct outlay of money. The Premium Machines will be selected new at the manufactory, and will be forwarded, well boxed, with full directions for setting up and using, and with no expense, except for freight.

Premium No. 5—Sewing Machine.

69 Subscribers at $1 each, (or **98** at 80 cents each,) will entitle the person procuring them to *Wilcox & Gibbs'* **$35 Sewing Machine,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than two years, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines. Some of our neighbors think this machine ahead of all others. Premium 5 will be selected and sent the same as No. **4.**

Premium No. 6—Barometer.

20 Subscribers at $1 each, (or **46** at 80 cents each,) will entitle the person getting up the club to one of *Kendall's* **Aneroid Barometers,** (Price $7 50.) This is a good, portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. See page 377, December No. It will save to the farmer and others many times its cost, as a weather-indicator. These instruments resemble a large watch, 5 inches in diameter, and 2 inches thick. Each one is in a neat leather case, and when sent to a distance, this is packed in cotton, in a wooden box 4½ by 8 inches, and can go anywhere, by express or otherwise, with perfect safety.

Premium No. 7—The Aquarius.

This is a capital instrument, valuable to have in every house. It is a portable hand force-pump, which any one can catch up at a moment's warning, and throw from a pail or other vessel a steady stream of water upon a fire in a house, or elsewhere. It is supplied with both a jet-pipe and a rose, or sprinkler, and can be used for washing windows, carriages, &c.; for sprinkling trees, plants, destroying insects, &c., &c. With it, it is easy to wash the second and third story windows, and to sprinkle water upon the roofs, while standing upon the ground. Such an apparatus will often enable a person to so use a bucket or two of water as to extinguish a fire breaking out where it could not be reached with water dashed on from pails. It is supplied with suction and injection India-rubber pipes, and with air-chambers to keep up a constant stream. The weight is 8 lbs., and it can be sent anywhere as freight, or by express. (Price $10.) We will present an **Aquarius** complete to any one sending su **22** subscribers at $1 each, (or **47** at 80 cents each.)

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or **237** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one for three years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without expense to the recipient, except for freight. Schools and churches can readily combine their efforts and secure one of these instruments. This has been frequently done

N. B.—Any higher or lower priced Melodeons will be given for other lists, in the same proportion. See table above.

Premium No. 12—Best Dictionary.

25 Subscribers at $1 each, (or **53** at 80 cts. each,) will entitle the person getting up the club to a copy of the *large Pictorial Unabridged Edition of* **Worcester's Dictionary,** (Price $8 50.) This now stands confessedly the most valuable Standard Dictionary published. It weighs nearly **10** lbs.; is **12** inches long, **10** inches wide, nearly **4** inches thick, and contains **1854 pages** of 3 columns each, giving the spelling and pronunciation, with full explanations, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country.

Premiums Nos. 13 to 18—Back Volumes—A First-rate Library.

These premiums (13 to 18,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume **XVI.** These will be sent *post-paid*, in clean, new numbers, each volume by itself, with index. The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz: For **20** Subscribers at $1 each, (or **36** at 80 cents each,) we will present **six volumes.** For **16** Subscribers at $1 each, (or **30** at 80 cents each,) we will present **five volumes.**—For **13** Subscribers at $1 each, (or **26** at 80 cents each,) **four volumes.**—For **10** Subscribers at $1 each, (or **20** at 80 cents each,) **three volumes.**—For **15** Subscribers at 80 cents each, **two volumes.**—For **10** Subscribers at 80 cents each, **one volume.**—Let every one be careful to name just *which* back volumes are desired.

Premium No. 19—Best File for Agriculturist.

Jacobs' Portfolio File, made just to fit the *Agriculturist*—the name gilded on. This is a leather cover or portfolio, so arranged that successive numbers of the paper can be inserted in a minute, and be properly preserved in book form for reading. When one volume is completed, the sheets can be removed and stitched, and a new volume inserted. A single cover will answer for a dozen successive volumes. It is the most complete file yet made. The price now is $1.25, and the postage 23 cents. We will forward it, post-paid, to any one sending *fourteen* subscribers, at the lowest club price, (80 cents each.)

Premium No. 20—Paints.

14 Subscribers at $1, or **28** at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid any where in the United States within 3000 miles.

Premium No. 21—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a neat case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, will answer for ordinary practice by children or beginners, and for common sketching. Sent same as No. 20.

Premiums Nos. 22 to 26.

We have not space to describe these particularly. The Cylinder Plow was described in this journal last year. The Eagle Plow is well known, and so is the Hay and Straw Cutter, and the Steel-toothed Cultivator, one of the most useful implements on the farm. The Lard and Wine Press is a very convenient household implement, for pressing out lard or tallow, the juice of grapes, currants, berries, &c. For the prices, and subscribers required, see the table above.

A Constant Exhibition.

The Tables at the Office of the *American Agriculturist* have constantly, during the entire year, novel and interesting FRUITS, FLOWERS, GRAINS, VEGETABLES, ROOTS, ETC., contributed by SUBSCRIBERS, NURSERYMEN, GARDENERS and others, and, except in mid-winter, almost uniformly present a very attractive and instructive exhibition.

Our tables are spacious, and the Office large and airy, and the best care will be taken of the articles contributed.

The Postage on the Agriculturist is positively only Six Cents a Year.

The law expressly says that a Periodical issued at stated periods, and not weighing over 3 ounces avoirdupois, shall be charged *one cent* per number, and only *half* this sum if paid quarterly in advance. The paper for the *Agriculturist* is purposely manufactured so that it shall weigh a little *less than three ounces* when printed; the legal postage is therefore only six cents a year, if paid quarterly in advance.

Mail-Lost Numbers Supplied.

It is hard for the Publisher to alone bear all the losses arising from the carelessness or oversight of the 20,000 Postmasters and carriers who have the handling of the *Agriculturist* between the office and the subscribers But since Uncle Samuel monopolizes the carrying business, and won't stand any losses, and we can't compel him to, we shall cheerfully send a second copy of any number when the first one mailed, fails to reach its proper destination, on being notified of the fact. Numbers received and lostor spoiled will be forwarded at 10 cents each.

Circulation of the Agriculturist.

Beyond all doubt or controversy, the circulation of the American Agriculturist to regular subscribers, is many thousands greater than that of any other Agricultural or Horticultural Journal in the World, no matter what its character, or time or place of issue. The publisher is ready at all times to substantiate this statement by comparing books.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

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Fifty cents per line of *space* for each insertion.
One whole column (145 lines), or more, $60 per column.
☞Business Notices, *Eighty cents* per line of space.

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A single man—American or Scotchman preferred—wanted to take charge of a farm. He must be a practical man of experience, industrious, and honest, able to read and write. Also a neat tidy woman who can cook, wash, make butter, &c. Address JOHN H. ROCHE,
Mead's Basin, Passaic Co., N. J.

COUNTRY HOUSE WANTED IN THE STATE of New-York, within 30 miles of the City, for a charitable institution. House must contain not less than 16 rooms, with from 8 to 12 acres of good land for gardening—wanted to hire, with the privilege of purchase in three years. Rent very moderate. Address "YORK," Station D., N. Y. City.

BUSINESS STAND FOR SALE.—One of the very best on the Canal. Address Box 96, Ellenville, Ulster Co., N. Y.

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This is the only authentic HISTORY OF THE WAR now published, and will contain over 500 Octavo pages, illustrated with numerous fine steel plates, from original drawings, by that eminent artist, SAMUEL SARTAIN, Esq.

A few good agents wanted, to whom the largest commission will be paid.

Specimen copies sent on receipt of the price, $2.50.

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The Cranberry and its Culture.

The Subscriber has issued a circular from the press, treating on the Cranberry and its Culture. Said Circular will give persons the proper information as to the commencement of the culture. He will take pleasure in forwarding them to all parts of the United States, to those sending stamp to pay postage. Persons wishing plants in large or small quantities, may receive them by express, for wet or dry soil. Address GEORGE A. BATES,
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LANE'S PURCHASING AGENCY,
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FLOWER AND VEGETABLE SEEDS for 1863.

CLOVER AND GRASS SEED.

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FRUIT TREES AND GRAPE VINES.

WOODRUFF'S BAROMETER,
Prices $3, and $12. Agents wanted.

UNIVERSAL CLOTHES WRINGER,
Prices $7, and $10.

NONPARIEL WASHING MACHINE,
Prices, No. 1, $12; No. 2, $16; No. 3, $20.
Send for Circular. See Premium No. 3, Agriculturist.

THE AQUARIUS, A Hand Force Pump, $8.
See No. 7 Premium List American Agriculturist.

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THE MOTHER'S JOURNAL—A Literary and Religious Monthly Magazine for Mothers and the household. *One Dollar a year.*
335 BROADWAY, NEW-YORK.

BOOKS FOR FARMERS AND OTHERS.

[Any of the following books can be obtained at the office of the *Agriculturist* at the prices named, or they will be forwarded by mail, *post paid*, on receipt of the price. Other books not named in the list will be procured and sent to subscribers when desired, if the price be forwarded. All of these books may well be procured by any one making up a library. Those we esteem specially valuable, are marked with a *.]

American Bird Fancier	$0 25
American Farmer's Encyclopedia	4 50
American Florist's Guide	75
American Weeds and Useful Plants*	1 50
Allen on the Culture of the Grape	1 00
Allen's (R. L.) American Farm Book*	1 00
Allen's Diseases of Domestic Animals	75
Allen's (L. F.) Rural Architecture	1 25
Barry's Fruit Garden*	1 25
Bement's (C. N.) Rabbit Fancier	50
Boussingault's (J. B.) Rural Economy	1 25
Bridgeman's Fruit Cultivator's Manual	60
Bridgeman's Young Gardener's Assistant*	1 50
Bridgeman's Kitchen Garden Instructor	60
Bridgeman's Florist's Guide	60
Brandt's Age of Horses*	50
Buist's American Flower Garden Directory	1 25
Buist's Family Kitchen Gardener*	75
Central Park Guide*	25
Chorlton's Grape-Grower's Guide*	60
Cole's (S. W.) American Fruit Book	60
Dadd's (Geo. H.) Modern Horse Doctor*	1 00
Dadd's (Geo. H.) American Cattle Doctor	1 00
Dana's Muck Manual for Farmers	1 00
Downing's Cottage Residences*	2 50
Downing's Fruits and Fruit Trees of America**	2 00
Downing's Ladies' Flower Garden	1 50
Eastwood on the Cranberry*	50
Every Lady her own Flower Gardener	50
Farmer's Practical Horse Farrier	60
Fessenden's American Kitchen Gardener	25
French's Farm Drainage *	1 25
Field's (Thomas W.) Pear Culture	1 00
Fish Culture*	1 00
Flint (Charles L.) on Grasses*	1 25
Flint's Milch Cows and Dairy Farming	1 25
Fuller's Strawberry Culturist	15
Goodale's Principles of Breeding	75
Guenon on Milch Cows	60
Hall's (Miss) American Cookery	1 00
Herbert's Hints to Horsekeepers**	1 25
Hooper's Dog and Gun	50
Johnson on Manures	75
Kemp's Landscape Gardening	1 50
Kidder's Bee Culture	50
Langstroth on the Honey Bee*	1 25
Leuchars' Hothouses	1 25
Liebig's Lectures on Chemistry	50
Linsley's (D. C.) Morgan Horses	1 00
Manual of Agriculture by G. Emerson and C. L. Flint	75
Mayhew's Illustrated Horse Doctor	2 50
McMahon's American Gardener	2 00
Meehan's Ornamental Trees	75
Milburn on the Cow and Dairy	25
Mites on the Horse's Foot	50
Norton's Scientific Agriculture	60
Olcott's Sorgho and Imphee	1 00
Our Farm of Four Acres....*....cloth 50 cts., paper	25
Onion Culture*	21
Pardee on Strawberry Culture	60
Parlor Gardener	65
Parsons on the Rose	1 25
Pedder's Farmer's Land Measurer	50
Phantom Bouquet, or Skeleton Leaves	1 00
Phin's Grape Culture	1 00
Quinby's Mysteries of Bee keeping*	1 25
Randall's Sheep Husbandry	1 25
Richardson on the Hog	25
Robin's Produce and Ready Reckoner	60
Rose Culturist	25
Shepherd's Own Book	2 00
Smith's Landscape Gardening	1 25
Spencer's Education of Children**	1 00
Stewart's (John) Stable Book	1 25
Thomas' (John J.) Farm Implements *	1 00
Todd's (S. E.) Young Farmer's Manual	1 25
Tucker's Register Rural Affairs	25
Turner's Cotton Planter's Manual	1 25
Warder's Hedges and Evergreens*	1 25
Watson's American Home Garden	1 50
Week's (John M.) Manual on Bees	50
Wood's Class Book of Botany*	2 50
Yale College Agricultural Lectures	25
Youatt and Spooner on the Horse	1 25
Youatt and Martin on Cattle	1 25
Youatt on the Hog	75
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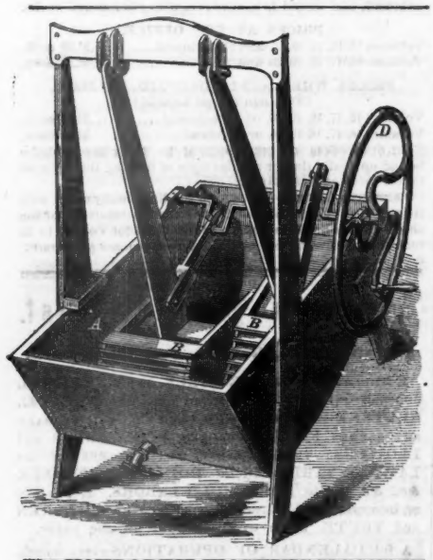

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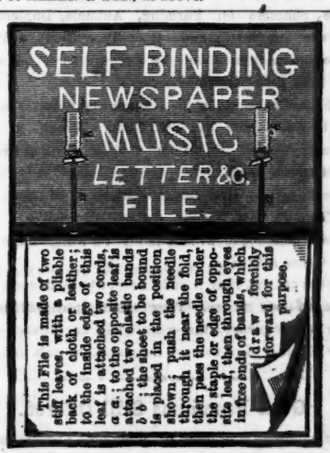
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FARMINGTON, N. H., OCTOBER 9, 1862.

JAMES R. DEY, Esq., President Lodi Manufacturing Co.

For several years past I have used as a fertilizer, the Lodi Manufacturing Co.'s Poudrette. I commenced in 1859. I then had a tenant carrying on my farm upon shares. He agreed to use such artificial means as I should furnish free of expense to him, but he had but little faith in anything but barn-yard manure. I purchased some Poudrette. He took it from the freight-house; opened it; came to me with eyes wide open, and said, "YOU HAVE GOT CHEATED, THIS STUFF IS NOTHING BUT DIRT." I told him, "I supposed I had; it was nothing new; I was in the habit of getting cheated, but as it cost him nothing, I wanted him to use it."

We had a piece of poor, sandy loam land, which he planted with potatoes, without manure. He put Poudrette in the hills eight rows, then omitted eight rows, and then put lime in the hill, as he had a mind to try that.

The result was, that where the Poudrette was put, the potatoes came up three or four days before the others. The tops were twice the size during the season, and at harvesting we measured two lots of each, one of which the Poudrette gave twice the quantity of potatoes, and the other in the proportion of five to three.

The lime had no perceptible effect.

We had a piece of corn land, sandy loam, (my tillage land is sandy and gravelly loam,) the corn had a liberal dressing, say ten cords of barn dung to the acre, spread upon grass land, a part ploughed in the fall before, the balance in the spring. The tenant prepared a compost to put in the hill, a mixture of night soil, hog manure and loam well mixed, several times shovelled over, and well incorporated together. This was put in the hill. In eight rows through the middle of the piece, this was omitted and Poudrette was substituted instead. The result was, the Poudrette brought the corn up sooner, of a better color, and at the end of two weeks after it came up, nearly twice as large, and it maintained it a head and shoulder above the other during the season. At harvesting, we measured the corn, and where we got five bushels with the compost, we had six bushels with the Poudrette.

This satisfied me, and convinced my unbelieving tenant that it was something besides DIRT. I have used it with whatever I plant ever since, and shall continue to do so, as long as it maintains its character, and is furnished at reasonable prices. We sometimes think we save an entire crop of corn by the use of Poudrette, in case of early frost, as it brings the crop to maturity at least a week earlier.

There has been an increasing demand here since it has been introduced, and from my own observation, and the information of others, I think it does as well on upland soils, as upon sandy loam. I have not been so particular since my first experiment, but every year I left a few rows so as to be sure that it maintains its character. The present year there is a very marked difference in the appearance of a few rows left without the Poudrette, in a piece of corn not yet harvested. The appearance of your Poudrette to one not accustomed to it, is not very flattering. I will relate an anecdote on this point. In 1860 I prevailed upon a neighbor to try a couple of barrels, for which, I think, he paid me $4.50. He informed me afterwards, that he took it into his field all alone, and opened it; said he, I said to myself, if some one will come along and give me a dollar, he shall have both barrels. No one coming along, he tried it, and has used it every season since, and thinks very highly of its fertilizing qualities. Some of my neighbors have said to me, that they thought it had been worth to them $5 per barrel. I have used other fertilizers, such as Guano, Superphosphate, &c., most of which are beneficial, but none come fairly up to the Poudrette. One particular advantage Poudrette has over other fertilizers is, that the smell is not offensive, and it will not kill the seed.

And again, it is not so expensive. My method is, TO PUT IT IN THE HILL WITH THE SEED. A quart by measure is ample for ten hills, at which rate a barrel will manure a thousand hills. I have known it to do well when a less quantity was used. I think nothing else should be put with it. It is a light matter to put it in the hill with the hand, as a person can drop it faster than a boy can drop corn. And it does not require the large hole necessary to put in dung or compost, and is a protection against the wire worm.

Respectfully yours,
GEO. L. WHITEHOUSE.

The Company's pamphlet, containing directions for use and other valuable information, will be sent free to any one applying for the same. Address

J. T. FOSTER,
Care of the Lodi Manufacturing Co.

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A Thousand Thanks

To our readers for their substantial expressions of good will. Subscribers have come in during the past month in far greater numbers than ever before. Owing to the greatly increased cost of printing paper, we expected to lose some thousands of dollars this year, but it now begins to look as if our readers would not allow that. One name more from each present subscriber would put everything all right—and more. Can we have that name this month? Will the reader contribute one name? There is doubtless some neighbor or friend who will be benefited by perusing the *Agriculturist* for a year. It costs

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Good Premiums Still Offered.

We continue the offer of premiums another month. [See rom[illegible] in *italics* at head of list on page 60.] We are now sending out many hundreds of these good articles. A little effort will secure, without cost, valuable books, household implements, etc. Lists partly filled can be completed, and new premium clubs can still be commenced. Who will have a premium this month?

☞ Books have advanced (see list page 61) and will advance more if Congress does not take off the duty on paper. Now is the time to secure them as premiums, or otherwise.

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Numerous letters containing small sums, are continually being sent by express, on which the expense is ten to twenty per cent. of the whole amount enclosed. It don't pay in these high priced paper times, to send ten copies for $8, and then to pay from 50 cents to $1.50 in express charges. Small sums come very safely by mail, *if* the letters are properly sealed and directed. Larger sums are sent cheaply in the form of a draft on a City Bank, payable to the order of the publisher—not in individual checks on distant Banks, which must be sent for collection at considerable outlay of time and expense.

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About the Seed Distribution.

On page 38 we republish the list of seeds, with some emendations, and a special note to Canada Subscribers. We regret that the Canada postage laws, or rather the method of construing them at some of the Offices, is not more liberal. Of those sent last year with the U. S. postage prepaid here, most went through all right; but in other cases an additional 20 cents an ounce was added at some offices on the way or exacted when delivered. To thousands of our Canada subscribers some of these seeds would be of special value, but 20 cents an ounce is too great a tax.——No seeds will be ready for delivery at the office or by express until March. They are all put up at our country place, and those sent by mail, are mailed there. By our method of putting up, it sometimes happens that of two envelopes sent to the same person, one may be mailed several days before the other, if they contain different kinds of seeds.

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